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ANNUAL REPORT

OF THE

CITY ENGINEER

OF

TORONTO

FOR

1900.

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TORONTO.

TOPOGRAPHY.—The City of Toronto is situated upon the northern shore of Lake Ontario, about forty miles easterly of its western terminus. It lies in latitude 43° 39′ 10″ north, longitude 79° 23′ west, on a plateau gently ascending north for a distance of three miles, where an altitude of about 220 feet above the lake level is reached. It extends about eight miles along the lake, and is generally level, with slight depressions at points where minor water courses previously existed. The harbor is formed in front of the City by a sandy island, which lies to the south, at a distance of about a mile and a half.

Toronto is the Capital of the Province of Ontario, and in it are situated the Provincial Parliament buildings and Government House, the residence of the Lieut.-Governor of the Province.

STATISTICS.

AREA.—The area within the City limits, not including the portions of the City land covered by water, is 17.17 square miles.

POPULATION.—The population of the City, according to the census taken by the Directory Company, is 237,000.

PUBLIC STREETS AND LANES.—Within the City limits there are 259.03 miles of streets and 84¼ miles of lanes, of which 181.85 miles are paved, and 77.18 miles unpaved.

PAVEMENTS AND ROADWAYS.—

Asphalt	30.81	miles.
Cedar block	85.78	“
Brick	10.77	“
Macadam	47.81	“
Wood on concrete	.67	“
Stone and scoria block	.68	“
Gravel	5.34	“

SIDEWALKS.—

Stone flag	1.821	miles.
Concrete	25.089	“
Brick	2.545	“
Wood	400	“

SEWERAGE.—The City is drained by what is known as the combined system of sewerage, and there are 232½ miles of sewers.

WATER WORKS.—The Water Works system is owned and operated by the City, the supply being obtained from Lake Ontario by direct pumping through a 6-ft. steel conduit laid under Toronto Bay to the Main Pumping Station on the water-front, the surplus water being pumped through the City mains to the Reservoir situated north of the north City limits. Cost of system to date, about $4,000,000.

STATIONS AND ENGINES.—

Main Pumping Station:

No. 1 Engine, 4,000,000 gallons capacity, 24 hours.
" 2 " 8,000,000 " "
" 3 " 10,000,000 " "
" 4 " 10,000,000 " "
" 5 " 10,000,000 " "

High Level Pumping Station—Two engines with a tota capacity of 6,000,000 gals. in 24 hours.

Island Pumping Station.—One engine with 500,000 gallons capacity in 24 hours.

258.564 miles of water mains.

43,242 water services.

3,066 street hydrants.

2,479 valves.

1,700 meters in use.

Water Rates—Average schedule, 2½c. per 1,000 gallons, and by meter, 10c. per 1,000 gallons.

38,000 water takers.

Pressure—Domestic, 90 lbs.; fire, 100 lbs.

Average quantity pumped in 24 hours, 22,093,150 gallons.

Water pumped daily, 22,094,204 gallons.

Water supplied annually, about 8,064,000,000 gallons.

Fuel used—Soft coal screenings and hard coal,

Cost of fuel during 1900, $38,668.54.

Revenue collected in 1900 by schedule rate	$156,791 06
" " meter rate	115,469 34
Charges made against different branches of civic service for water used	54,841 00
Total	$327,101 40
Operating expenses, incluing cost of collecting rates	$400,651 87
House services and pipe laying	20,378 48
Total	$421,030 35

FIRE PROTECTION.—

185 officers and men in brigade.
63 horses.
59 pieces of apparatus for various purposes.
3,066 fire hydrants.
16 Fire Stations.
5 steam fire engines.

POLICE PROTECTION.—

291 officers and men.
1 Headquarters and 7 Stations.

MILITARY.—There are 2 regular corps stationed in the City (1 mounted and 1 infantry) at Stanley Barracks near the site of old Fort Rouille, and 5 militia corps (2 mounted and 3 infantry), four of which have first-class bands and the use of a well equipped and commodious Armouries.

LIGHTING.—There are four lighting companies doing business in the City. The Consumers' Gas Company have 251 miles of mains and 26,982 consumers. Carbon Light and Power Company have 901 street lights. Toronto Electric Light Company have 1,204 street electric arc lights and 500 private business arc lights, and also 960 miles of overhead and underground wire, and 50 miles of underground conduit. Toronto Incandescent Electric Light Company have about 100,000 private business incandescent electric lights.

TELEPHONE AND TELEGRAPH SERVICES.—The Bell Telephone Company is the only company doing business in the City; they have 7,145 telephones in use, 10,894 miles of overhead, 9,438 miles of underground wires, 48,756 feet of underground conduits, and 592,436 feet of ducts.

There are two telegraph companies doing business in the City, the Great North-Western Telegraph Company with 70 sets of instruments, and 245 miles of overhead wires; and the Canadian Pacific Railway Telegraph Company.

PUBLIC PARKS.—The public parks of the City are under the control of the City Council. There are 21 public parks, having a total area of about 1,152 acres.

EDUCATION.—The educational system is under the direction and control of the Public School Board, the Collegiate Institute Board and the Separate School Board. There are 57 public schools, having a total of 566 rooms, with a staff of 678 principals and teachers. Three Collegiate Institutes, with a staff of 31 principals and teachers. Eighteen Separate Schools with a staff of 99 principals and teachers.

8 Industrial Schools (Protestant).
2 Industrial Schools (R. C.).
30 Colleges, Seminaries, and Pay Schools.
1 Technical School.
4 Universities.
3 Cathedrals of all denominations.
209 Churches of all denominations.
48 Missions.
5 Mission Training Schools.
9 Convents.

PUBLIC LIBRARY.—There is one central reference and circulation Public Library, and 6 circulation libraries, all under the control of the Public Library Board, with W. T. J. Lee, Chairman of the Board, and James Bain, Chief Librarian. There are 117,127 volumes in circulation.

PUBLIC INSTITUTIONS.—

62 Hospitals, Asylums and Public Homes.
3 Institutions for destitute and criminal classes.

LAW.—Toronto is the centre of the law system of the Province of Ontario, having 27 Law Courts within its limits.

AMUSEMENTS.—

5 Theatres.
22 Music and Concert Halls.
238 Public Buildings, Halls, etc.

PUBLIC ACCOMMODATION.—

181 Hotels.
260 Boarding houses.

RAILWAYS.—There are 2 railway companies whose systems enter Toronto, viz., the Grand Trunk Railway, with about 85 miles of tracks laid in the City limits.

The Canadian Pacific Railway Co., with about 31 miles of tracks laid in the City limits.

92 passenger trains entering and leaving City daily.
176 freight trains entering and leaving City daily.

The Toronto Railway Company has the exclusive franchise for operating a street railway system within the City limits. They have 85.025 miles of tracks, over 200 cars in operation, and carried 36,061,867 passengers during 1900.

BUSINESS.—

6 Daily newspapers; 49 weekly; 20 semi-monthly; 76 monthly and 8 quarterly newspapers and periodicals.
5 Public markets.
29 Banks, not including branches.
628 Factories and manufactories.
360 Wholesale houses.
2 Departmental stores.
6,227 Miscellaneous businesses, companies, corporations and stores

SANITATION.—

Street Cleaning, Watering and Scavenging.—A modern and complete system of street cleaning, watering and scavenging is owned and operated by the City.

The supervision of the sanitary requirements of the City is under the control of a Local Board of Health.

PAST CITY ENGINEERS OF TORONTO.—

1840-1842, Thomas Young.
1845-1852, John G. Howard.
1853, William Thomas.
1854, John G. Howard.
1855, William Kingsford.
1856, Thomas H. Harrison.
1857-1858, Thomas Booth.
1859-1860, Alfred Brunel.
1861-1870, J. H. Bennett.
1871-Oct. 1875, Chas. W. Johnston.
Oct., 1875-July, 1880, Frank Shanly.
Sept., 1880-July, 1883, R. J. Brough.
Oct., 1883-1889, Charles Sproatt.
1890-Sept., 1891, W. T. Jennings.
Sept., 1891-May, 1892, Grenville C. Cunningham.
May, 1892-Jan., 1898, E. H. Keating.

ANNUAL REPORT

OF THE

CITY ENGINEER

OF THE

CITY OF TORONTO

FOR THE YEAR 1900.

City Engineer's Office,
Toronto, December 31st, 1900.

To His Worship the Mayor and Members of the Council of the Corporation of the City of Toronto:

Gentlemen,—In compliance with By-law No. 2534, I have the honor to lay before you the Annual Report of the Department for the year ending the 31st December, 1900, setting forth the various works carried out during the year, with details of cost of construction, etc.

OFFICIAL STAFF.

The following is a list of the chief officials of the Department:

City Engineer and Chief Engineer and Manager of the Water Works	Charles H. Rust, M. Can. Soc. C.E., M. Am. Soc. C.E.
Deputy City Engineer	C. L. Fellowes, C.E.
Asst. Engineer	C. B. Smith, M. Can. Soc. C.E.
Asst. Engineer	J. Williams, M. Can. Soc. C.E.
Asst. Engineer	W. A. Clement, A.M. Can. Soc. C.E.
Street Commissioner	John Jones.
Assistant to Street Commissioner	Wm. J. Evans.
Accountant	Wm. McCartney.
Chief Clerk	E. P. Roden.
Secretary Committee on Works	A. H. Clarke.
Secretary to City Engineer	Geo. J. Castle.
Chief Engineer Main Pumping Station	Alex. McRae.
Chief Engineer High Level Pumping Station	Wm. Hall.
Foreman of Water Works Construction	Edward Foley.

WATER WORKS REPORT.

For Water Works matters see separate report.

WORKS DEPARTMENT.

FINANCIAL.

During the year the total expenditure of the Works Department, not including Water Works, was $1,065,802.36, which was divided as follows:

General works	$278,325	89
Special works	124,584	15
Street railway track allowance pavements	3,080	71
Local improvements	560,618	34
Bridges, subways, etc	61,527	49
Departmental and sundry accounts	37,665	78
Total	$1,065,802	36

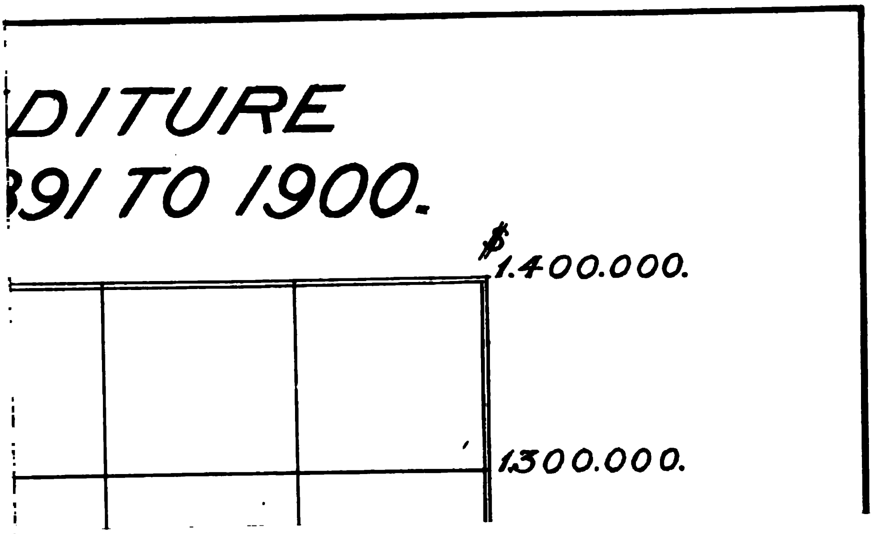
The amount expended for Local Improvement Works was divided as follows:

Pavements and roadways	$440,173	71
Concrete sidewalks	67,632	88
Brick sidewalks	472	92
Plank sidewalks	45,167	34
Sewers	7,171	49

The amount expended in 1899, was $945,324.26, showing an increase for 1900 of $120,478.10, or about 13 per cent. over the amount expended in 1899. The total amount expended by the Department during the year, including Water Works expenditure, was $1,233,724.81. A diagram is attached to this report showing the expenditure during the past ten years.

PAVEMENTS AND ROADWAYS.

Attached to the report of the Assistant Engineer in charge of Pavements and Roadways is a table giving the total number of square yards of the various classes of pavements and roadways in the City and the number laid last year, together with the maximum grade, and also the cost. In the same report is to be found very interesting tables of a number of works carried out by day labor, showing a profit to the City of about $5,209. Most of these works were awarded to the Department in competition with contractors, the tenders of this Department being the lowest.


DITURE
91 TO 1900.
$1.400.000.
1.300.000.

In 1895 an experiment was made with different kinds of wood as paving material, on the west approach to the King Street Subway, the woods used being beach, maple, rock elm soft elm, hemlock, Norway pine, white pine and cedar. All the blocks were rectangular, 4-in. x 7-in. deep and 8-in. to 12-in. long, with the exception of the cedar, which were the ordinary round blocks. In June of this year these different woods were examined with the following results: Beach, nearly all the blocks were decayed; maple, a few of the blocks were in good condition, but the majority of them had dry-rot; rock elm, most of the blocks were in good condition, with the exception of a few, which showed signs of dry-rot; soft elm, the blocks were all decaying; hemlock, the majority of the blocks were sound; Norway pine were in fairly good condition, but the traffic had decreased their depth to about a half inch, and a few of them showed signs of dry-rot; white pine were in as good condition as the Norway pine, a great many of the blocks showing signs of dry-rot. The round cedar blocks were in better condition than any of the other woods.

During the year a great many pavements, roadways and sidewalks have been constructed, and Council will no doubt be pleased to see that the citizens are evincing a strong desire for a pavement of a permanent character, and only upon streets where cedar block pavements already existed, where there is a great deal of vacant property and the property owners at present cannot afford an expensive pavement, have block pavements been relaid. This class of pavement remains in fairly good condition for five or six years. There was, however, some dissatisfaction among a few of the property owners on these various streets, who desired a better class of pavement and in some cases objected to the manner of construction. I consider the pavements have been fairly well laid, and the ratepayers have in every case received full value for their money.

The records attached to the report of the Assistant Engineer in charge of the Roadway Department, show that 24.666 miles of new pavements and roadways and 15.265 miles of concrete and brick sidewalks were constructed during the year, divided as follows:

6.348 miles of asphalt pavement; 6.045 miles of brick pavement; 7.842 miles of cedar block pavement, and 2.503 miles of macadam roadways, and about 2 miles of gravel, scoria and stone sett roadways.

The asphalt pavement appears to be the favorite. I think, however, that brick for residential streets will last quite as long and will not cost as much for maintenance as asphalt, but the great objection to this class of pavement is the noise. We have as far as possible taken steps to remedy this, but there is still considerable rumbling, and I am afraid it is absolutely impossible to entirely prevent it. The bricks used in the construction of the various pavements have been entirely of Canadian manufacture, and in some instances they have not complied fully with the abrasion test called for in the specifications. These tests were made with the old form of rattler, as adopted by the Brick Manufacturers' Association, but I have since ascertained that this has not given satisfactory results and is being gradually discarded, and the Department at present is engaged in making fresh tests with a somewhat different form of machine. We intend during the coming year to have these specifications amended.

The repairs to asphalt pavements during the past year, upon which the contractors' maintenance guarantees have expired, amounted to $12,836.77, and this amount will increase annually, as the mileage of asphalt pavements increases.

It will be noticed that we have laid a considerable mileage of macadam roadways. While this is a very good roadway for driving over, on streets where there is not much traffic, it is the most expensive roadway to maintain, and has the objection of being very dirty in wet and very dusty in dry weather. I regret very much that the Council cannot appropriate sufficient funds to properly maintain these roads.

During the year there was only about one-third of a mile of gravel roadway laid. This class of roadway has not been found satisfactory for City traffic, and I am of opinion that its construction should be entirely discontinued.

It is very desirable that some means be provided whereby the lanes in the central portion of the City could be paved with brick. The condition of these lanes at present is very unsatisfactory, and if paved, their sanitary condition would be very much improved.

Attached to the report of the Engineer in Charge of Roadways may be found a table showing the number of roadways and sidewalks recommended from 1890 to 1900 and the number petitioned against by the property owners.

SEWERS AND SPECIAL WORK.

During the year there were 6,160 lineal feet of sewers of all sizes constructed. There are at present 232½ miles of sewers in the City. There was also constructed 15,135 feet of 6-inch, 1,025 feet of 9-inch and 33 feet of 12-inch pipe for house purposes, viz., connections from the street line to the main sewer.

FLOW IN SEWERS.

It was considered advisable, in connection with the report upon Sewage Disposal, to have the flow in the various sewers accurately gauged. Attached to the report of the Assistant Engineer is a chart showing the results of this gauging.

SAND PUMP.

The sand pump was employed during the season in Ashbridge's Bay and at the Island, the total quantity of material removed being 70,000 cubic yards, at a cost of 7 cents per cubic yard.

For further information regarding these matters, reference may be made to the report of the Assistant Engineer.

AREAS AND COAL CHUTES.

The charges for the privilege of constructing areas and coal chutes produced a revenue of $5,522.56 for the year.

BRIDGES.

During the year, Queen Street, Eastern Avenue and Humber River bridges were completed by the Hamilton Bridge Works Company, contractors for these works, the contract prices being as follows

Queen Street	$20,000 00
Eastern Avenue	4,400 00
Humber River	6,500 00

Photographs of these bridges are attached.

In addition to the above work, necessary repairs were made to the various bridges, details of which are to be found in the report of the Assistant Engineer.

STREET COMMISSIONER'S DEPARTMENT.

In connection with the report of the Street Commissioner, I would refer more particularly to the remarks made regarding Street Cleaning and to the suggestions as to how the work would be facilitated if householders were compelled to take care of all waste paper and other rubbish which is now thrown out in the lanes.

In connection with Snow Cleaning, we removed about 45,000 loads of snow, at a cost of about 30 cents per load, and during the winter about 440 miles of sidewalks were cleaned, at a cost of 3½ mills per foot frontage for each cleaning. This is done under the provision of the Snow Cleaning By-law, and only applies to vacant property.

I beg to refer also to the Street Commissioner's report regarding street watering and flushing asphalt pavements.

ASSISTANTS.

The work of the Department during the past year has been carried out under the same organization which has existed for the past ten years, the work being divided among the Assistants as follows:

Mr. C. L. Fellows, Deputy City Engineer, has charge of all Water Works matters, and, in the absence of the City Engineer, he has control of the Department.

Mr. John Jones, Street Commissioner, has charge of all the ordinary repairs to streets, the construction and repair of Wooden Sidewalks, Street Watering, Street Cleaning, Scanvenging, Snow Cleaning, etc.

Mr. C. B. Smith, Assistant Engineer, has charge of Sewers and Special Work.

Mr. John Williams, Assistant Engineer, has charge of Bridges, and is also Mechanical Draughtsman for the Department.

Mr. W. A. Clement, Assistant Engineer, has charge of the Construction of Roadways, Pavements and Permanent Sidewalks, and Repairs to Asphalt Pavements.

Attached to this report, for future reference, are the names of all City Engineers since the office was created in 1840.

Diagrams are also submitted showing the cost of various works, and the office expenses for the past ten years.

TELEGRAPH, TELEPHONE AND OTHER ELECTRICAL COMPANIES.

I again desire to call the attention of the Council to the need of obtaining legislation to compel the various Electrical companies to place all their wires underground in such sections of the City as the

Council may consider desirable. This should also include the feed wires belonging to the Toronto Railway Company. In connection with this matter it would be worth considering the construction of tunnels, as suggested by Mr Jennings, when he was City Engineer, in his report to Council in 1890. The time has certainly arrived when steps should be taken towards doing away with the number of poles and overhead wires that at present disfigure the principal streets.

STREET RAILWAY MATTERS.

We have had a great deal of difficulty during the past year in enforcing the Toronto Railway Company's agreement with the City. The citizens generally are of the opinion that the City Engineer has a great deal of power, but in endeavoring to enforce the agreement it is found that it is worded in such a way that it seems impossible to have our orders carried out without taking proceedings in the Courts. It would be of considerable benefit, not only to this Department, but to the citizens generally, if the law suits already commenced, at the instigation of this Department, were brought to an issue, and we would then know what power the Department has. During the latter part of the year, under instructions from the Council, we had a staff of men keeping records of the number of cars running upon the various street car routes. These records show that the Company have increased their service on a number of routes, but they are not yet carrying out, in its entirety, the time table as recommended by the City Engineer on November 22nd, 1900, and adopted in Council December 10th, 1900.

ADDITIONAL REPORTS.

During the year, under instructions of the City Council, reports have been prepared upon the cost of Electric Light and Energy, a Municipal Telephone Plant, City Asphalt Plant and Sewage Disposal, etc., copies of which reports are attached in Appendix.

TAXATION.

At the meeting of the American Society of Municipal Improvements, a paper was read by Mr. Herman, one of the Commissioners of the Public Works Department of Cincinnati, on the rate of taxation in different cities. As this table may prove of interest to the members of the Council and citizens, I attach same to this report, which may be seen in the Appendix.

PAVEMENTS, ROADWAYS AND PERMANENT SIDEWALKS.

City Engineer's Department,
Toronto, December 31st, 1900.

C. H. Rust, Esq.,
City Engineer.

Dear Sir,—Herewith I submit the Annual Report, showing in detail the work done under the supervision of the Roadway Branch of the Works Department.

During the year 24.666 miles of pavements and 15.265 miles of concrete and brick sidewalks were constructed. It will be seen by reference to Table 2 that the mileage of pavements constructed in 1900 shows an increase of 3.546 miles over 1899, and that during the past three years 70.428 miles of pavements were constructed, which is 27 per cent. of the total mileage of the streets in the City.

In connection with the carrying out of these improvements, 127 contracts were let in 1900 and 20 were carried over from 1899. Besides these, there were 32 works constructed by day labor, for nearly all of which tenders were received; but the City Engineer's bid being the lowest, the works were ordered to be carried out by day labor under his supervision.

Tables Nos. 9 and 10 show the actual cost of these works, also the loss or gain when compared witn the lowest contractor's tender.

In addition to the above, there were 20 private contracts for permanent sidewalks superintended, making a total of 199 separate works constructed under the direction of this Department, which are classified in the following table:

TABLE No. 1.

Class of Works.	*No. of Works.*
Asphalt	27
Brick on concrete	9
Brick on gravel	1
Brick on broken stone	3
Cedar block on gravel	24
Gravel	1

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Macadam	15
Cobble stone	1
Reconstruction of track allowance (brick, scoria and granite)	11
Reconstruction of track allowance with concrete	1
Concrete sidewalks	85
Brick sidewalks	1
Private contracts (sidewalks)	20
Total	199

In connection with pavements and sidewalks, including those which were proposed but not carried out, 196 plans and 659 estimates were prepared.

TABLE No. 2.

Mileage of Different Classes of Pavements, Roadways and Sidewalks Laid from 1890 to 1900.

Class of Work.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Pavements and Roadways.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Asphalt	1.73	1.635	6.216	5.607	3.067	1.156	0.366	0.460	3.408	6.215	6.348
Cedar block on sand and plank foundation	15.51	9.186	3.349	3.249	0.852	1.753	0.428	2.459	4.831	3.151	7.842
Macadam	.....	0.123	0.494	.....	0 059	1.663	1.661	0.510	2.089	5.013	2.503
Cobble	0.10	0.069	0.366	.....	.....	.....	.....	.....	.....	.....	0.068
Tamarac on concrete	0.192	0.077	.....	.....	.....	.....	.....	.....	.....	0.067	.....
Cedar block on concrete	.....	.....	8.416	2.185	0.826	0.227	0.038	.....	0.084	0.079	.....
Stone setts on concrete	.....	.....	0.705	3.743	2.563	0.085	.....	.....	.....	.....	0.107
Scoria blocks on concrete	0.138	.....	0.028	.....	.....	0.117	.....	.....	2.986	1.367	1.247
Brick on concrete	.....	.....	.....	3.964	0.787	0.744	1.032	5.803	6.079	3.670	5.472
Brick on gravel	.....	.....	.....	.....	.....	.....	0.028	0.838	0.352	0.943	0.057
Brick on broken stone	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.546	0.516
Concrete pavements in lanes	.....	.....	.....	.....	.....	0.071	.....	.....	0.057	.....	.....
Gravel	.....	.....	.....	.....	.....	.....	.....	3.138	4.756	0.069	0.303
Concrete in track allowance	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.203
Totals	17.670	11.090	19.574	18.748	8.154	5.816	3.553	13.208	24.642	21.120	24.666
Sidewalks.											
Concrete	1.426	1.930	1.508	2.259	1.137	1.918	0.612	1.050	2.548	5.474	15.227
Stone flag	1.273	0.398	0.104	0.035	0.011	.....	.....	.....	.....	.....	.....
Brick	.....	.....	.....	.....	.....	.....	0.204	0.823	1.188	0.292	0.038
Totals	2.699	2.328	1.612	2.294	1.148	1.918	0.816	1.873	3.736	5.766	15.265

The first pavements laid under the Local Improvement system were constructed during the year 1881, and the annual variation in the mileage of paved and unpaved streets, with classification of same, up to the end of the year 1900, is shown in the following Table No. 3:

TABLE No. 3.

SHOWING THE DIFFERENT CLASSES OF PAVEMENTS AND ROADWAYS AND MILEAGE OF SAME FROM 1881 TO 1900.

Year.	Cedar Block.	Stone and Scoria.	Asphalt.	Wood on Concrete.	Macadam.	Cedar Block with Asphalt on Track Allowance.	Cedar Block with Brick on Track Allowance.	Macadam with Stone Setts on Track Allowance.	Brick.	Gravel.	Unpaved.	Total Mileage.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1881	3.51	0.03	....	....	50.92	....	....	....	....	....	62.39	116.85
1882	13.41	0.03	....	....	48.28	....	....	....	....	....	55.13	116.85
1883	26.90	0.03	....	....	54.57	....	....	....	....	....	54.07	135.57
1884	33.76	0.25	....	....	52.32	....	....	....	....	....	76.77	163.10
1885	39.84	0.25	....	....	50.17	....	....	....	....	....	75.98	166.24
1886	48.99	0.36	....	....	47.36	....	....	....	....	....	72.18	168.89
1887	64.11	0.36	0.07	....	45.14	....	....	....	....	....	59.21	168.89
1888	79.55	0.36	0.25	....	42.76	....	....	....	....	....	49.87	172.79
1889	92.39	0.36	3.36	....	38.65	....	....	....	....	....	107.43	242.19
1890	109.57	0.36	5.08	....	36.63	....	....	....	....	....	90.55	242.19
1891	116.83	0.59	6.66	0.49	36.39	....	....	....	....	....	89.44	250.40
1892	116.86	0.65	10.49	0.49	36.98	2.35	....	....	....	....	84.89	252.71
1893	112.19	0.79	11.28	0.49	34.98	7.06	3.97	0.54	....	....	82.05	253.35
1894	111.16	0.81	13.70	0.49	35.95	6.35	4.50	0 54	....	....	79.98	253.48
1895	109.78	0.81	14.38	0.49	39.15	6.35	4.85	0.73	0.38	....	79.48	256.40
1896	108.70	0.81	14.61	0.53	39.71	6.35	4.93	0.70	1.32	....	79.74	257.40
1897	101.36	0.81	15.07	0.53	40.50	5.42	8.28	1.08	3.58	3.22	78.45	258.30
1898	94.90	0.65	18.30	0.61	41.91	3.73	7.43	1.26	5.91	4.56	78.67	257.93
1899	81.77	0.65	24.33	0.67	45.03	3.15	10.52	0.97	8.77	5.03	78.14	259.03
1900	70.49	0.68	30.81	0.67	46.90	1.54	13.75	0.91	10.77	5.34	77.26	259.12

TABLE No. 4.

SHOWING PERCENTAGE OF DIFFERENT CLASSES OF PAVEMENTS AND ROADWAYS.

Cedar block	27.20	per cent.
Stone or scoria	.26	"
Asphalt	11.90	"
Wood on concrete	.26	"
Macadam	18.10	"
Cedar block with asphalt between tracks	.60	"
Cedar block with brick between tracks	5.30	"
Macadam with stone setts between tracks	.35	"
Bricks	4.15	"
Gravel	2.06	"
Unpaved	29.82	"
	100.00	"

ASPHALT PAVEMENTS.

Asphalt pavements were laid during the year on portions of twenty-seven different streets and covering a total length of 6.348 miles, which is 25 per cent. of the total mileage of all classes of pavements and roadways constructed during the year.

The total length of asphalt in the City is now 30.81 miles, or 11.9 per cent. of the total length of paved and unpaved streets in the City. "Trinidad Pitch Lake" asphalt has been used exclusively for a number of years, although our specifications permit the use of several other varieties. Where the depth of asphalt surface required is 2½ inches a "binder course" about ¾ inches in thickness is first laid on the concrete foundation and rolled; the asphalt companies preferring the "binder" to the "cushion coat," and, as they are required to guarantee and maintain the pavement for a period of ten years, we allow them the option of laying either one or the other. In the case of a surface 2 inches in depth, the asphalt is laid directly on the concrete foundation.

The repairing of the asphalt pavements upon which the terms of guarantee have expired is let by tender; the price for the past two years has been $1.34 and $1.24 per square yard for 2½-inch and 2-inch surface respectively.

A list of the streets paved with asphalt on which the contractors' terms of guarantee have expired will be found in Table No. 5. The quantities, prices and other details connected with the asphalt pavements constructed during the year may be seen by referring to Tables Nos. 7 and 8.

TABLE No. 5.

SHOWING STREETS PAVED WITH ASPHALT UPON WHICH THE CONTRACTORS' GUARANTEES HAVE EXPIRED.

Street.	From	To	Length. Feet.	Date of Expiry of Guarantee.		
Bay	King	Front	932	Nov.	20,	1893
Jarvis	Queen	Bloor	6,734	Oct.	1,	1894
St. George	Bloor	Bernard	2,025	Oct.	9,	1894
Wellington	Church	Yonge	900	June	28,	1894
Sherbourne	Queen	Bloor	6,786	June	1,	1895
Simcoe	King	Queen	1,182	Aug.	1,	1895
St. George	Bernard	Dupont	966	June	14,	1895
Ontario	Carlton	Howard	2,824	July	28,	1895
Sherbourne	King	Queen	1,160	July	2,	1895
Bloor	Yonge	Sherbourne	2,661	Nov.	18,	1895
Scott	Front	Colborne	374	Nov.	7,	1895
Wellington	Bay	York	848	July	18,	1896
Gerrard	Jarvis	Sherbourne	934	July	24,	1896
Melinda	Yonge	Bay	587	Aug.	5,	1896
Jordan	Wellington	King	379	Aug.	5,	1896
Sherbourne	The Bridge	South Drive	1,076	Nov.	11,	1896
Bay	King	Queen	1,175	Aug.	15,	1896
St. George	College	Bloor	3,286	Sept.	25,	1896
Toronto	N. line stone pvt.	Adelaide	349	May	1,	1897
Adelaide	York	Spadina	3,001	July	21,	1897
Victoria	King	Adelaide	414	Sept.	1,	1897
Rose	Howard	Winchester	2,134	Sept.	1,	1897
Yonge	King	Hayter	4,000	Nov.	9,	1897
St. James	Ontario	Parliament	595	Sept.	7,	1897
Yonge	Hayter	Grenville	944	Nov.	14,	1897
Devonshire Pl.	Hoskin	Bloor	1,228	Sept.	30,	1897
Yonge	Grenville	Bloor	3,099	Nov.	25,	1897
Richmond	Victoria	Bay	852	June	27,	1898
Earl	Sherbourne	West terminus.	634	July	13,	1898
Winchester	Parliament	Sumach	1,512	Aug.	24,	1898
Munn's Lane	Wellington	218 ft. north	218	Aug.	23,	1898
Czar	Yonge	North	666	Sept.	25,	1898
Lane around Inla	nd Revenue Office		265	Oct.	5,	1898
Linden	Sherbourne	Huntley	585	Oct.	21,	1898
Hoskin	St. George	Queen's Pk. Cr.	1,130	June	27,	1899
Carlton	Jarvis	Sherbourne	937	June	7,	1899
Queen	Yonge	River	6,084	July	14,	1899
Bleeker	Carlton	Wellesley	1,412	July	5,	1899
Wellesley	Sherbourne	Parliament	1,227	Sept.	25,	1899
Cecil	Spadina	Beverley	1,052	Sept.	27,	1899
McCaul	Queen	College	3,384	Nov.	5,	1899
Adelaide	Yonge	Church	903	Nov.	8,	1899
King	Simcoe	Sherbourne	4,999	June	15,	1899
Leader Lane	King	Colborne	197	May	25,	1900
Avenue Rd. (track allowance.)	Bloor	Davenport	2,289	May	21,	1900
Avenue Rd	Bloor	Davenport	2,289	Aug.	29,	1900
St. Patrick	McCaul	Beverley	606	Sept.	9,	1900
Victoria	Adelaide	Queen	694	Sept.	28,	1900

BRICK PAVEMENTS.

There has been very little variation in the quantity of brick pavements constructed for each of the last four years. This year the length was 6.045 miles, about two miles of which was on residential streets and the balance was the reconstruction of the portion of the pavement between the street railway tracks on several streets, where the original cedar block pavement was worn out. This portion of the roadway in the centre of the street is subjected to very severe wear, particularly when the pavement on each side of the tracks is not in good repair, and we have found that bricks as a paving material give very good satisfaction. Most of our brick pavements are now laid on cement concrete foundation, the broken stone and gravel foundations not having proved altogether satisfactory, as they so often settle in places; this settling destroys the grout filler and leaves the edges of the bricks exposed to wear, and soon causes the pavement to become very rough. Details of the quantities and costs of the brick pavements constructed during the year may be seen by reference to Tables Nos. 7 and 8.

CEDAR BLOCK PAVEMENTS.

The cedar block pavements were reconstructed with a surface of new blocks on many of the streets, where the old blocks were worn out.

The total length of these renewals was 7.842 miles, which is more than double the length paved with this material in 1899. Tables Nos. 7 and 8 show in detail the quantities and cost of the cedar block pavements laid during the year.

Table No. 6 shows the sections of streets, on which the final assessment for pavements has been paid or will be paid during the ensuing year. Many of these pavements are beyond repair.

TABLE No. 6.

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Abbs	Brock	West terminus	C. B.	1891	1896
Adelaide	York	Spadina	Asphalt	1892	1900
Albany Av	Bloor	Wells	C. B.	1889	1899
Alexander	Church	McMillan	"	1884	1894
Alice	Yonge	Teraulay	"	1889	1899
Allan Av	Broadview Av.	Bolton Av	"	1887	1897
Alma Av	Gladstone Av	Dufferin	"	1887	1897
Argyle	Dundas	Gladstone	"	1895	1900
Augusta Av	Nassau	College	"	1886	1896
Augusta Av	Nassau	St. Patrick	"	1889	1898
Avenue Pl	Avenue Rd	Hazelton Av	"	1887	1897
Avenue Rd	Davenport Rd.	N. City limit	"	1890	1900
Baldwin	Beverley	Spadina Av	"	1895	1900
Balmuto	Bloor	Czar	"	1884	1895
Barton Av	Manning Av	Euclid Av	"	1890	1900
Barton Av	Palmerston Av.	Euclid Av	"	1892	1897
Bathurst	S. s. Bridge	N. railway gate	"	1886	1897
Bathurst	College	Bloor	"	1884	1895
Bathurst	College	Queen	"	1889	1898
Bathurst	Bloor	C. P. Railway	"	1890	1900
Bay	King	Front	Asphalt	1889	1898
Bay	King	Queen	"	1891	1899
Bedford Rd	Bernard Av	Davenport Rd.	C. B.	1889	1898
Bedford Rd	Bloor	Lowther	"	1890	1900
Belmont	Yonge	Davenport Rd.	"	1887	1897
Birch	Yonge	West terminus	"	1890	1900
Bishop	Davenport Rd.	West terminus	"	1886	1896
Bismarck Av	Yonge	Gwynne Av	Macadam	1891	1897
Bismarck Av	Gwynne Av	East end	C. B	1891	1897
Bleeker	Wellesley	Howard	"	1893	1898
Bloor	Yonge	Sherbourne	Asphalt	1890	1900
Bloor	Walmer	Bathurst	C. B.	1889	1900
Booth Av	Queen	Eastern Av	"	1891	1896
Booth Av	Queen	G. T. Railway	"	1889	1899
Bridge	Bloor	Elm Av	"	1890	1900
Brighton	Pape Av	East end	"	1890	1899
Broadview Av	Withrow Av	Danforth Av	"	1890	1898
Broadview Av	Queen	Gerrard	"	1887	1897
Broadview Av	Gerrard	Withrow	"	1887	1897
Broadview Av	Queen	Eastern	"	1891	1896
Brook	Logan	Howland Rd	"	1888	1898
Brooklyn	Queen	North end	"	1887	1897
Brock Av	Muir	College	"	1888	1898
Brock Av	Dundas	College	"	1888	1895
Brown (now Seaforth Av.)	Brock	West terminus	"	1891	1896
Brownsville La.	St. Joseph	St. Albans	"	1889	1900
Bruce	Shaw	Givens	"	1892	1897

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Brunswick Pl.	Walmer Rd	Brunswick Av	C. B.	1890	1900
Bulwer	Spadina	Soho	"	1889	1899
Casimir	St. Patrick	N. to a lane	"	1889	1898
Callendar	Queen	North terminus	"	1890	1898
Carlaw Av	Queen	Eastern Av	"	1889	1899
Carlaw Av	Eastern Av	Bay	"	1885	1897
Carlaw Av	Eastern Av	South end	"	1885	1897
Carlton	Sumach	East end	"	1886	1897
Caroline	Queen	Eastern Av	"	1889	1899
Carr	Esther	End of Carr	"	1894	1899
Cawthra Sq	Jarvis	West end	"	1891	1897
Cherry	Sorauren	Roncesvalles	"	1888	1898
Christie	Bloor	Melville	"	1891	1898
Church	Queen	Gerrard	"	1886	1897
Church	King	Front	"	1887	1897
Church	Gerrard	Bloor	"	1887	1897
Churchill Av	Term. of pave't.	136 ft. east	"	1893	1898
Clarence	Wellington	North end	"	1886	1897
Clara	Oak	Orford	"	1886	1896
Clinton	473ft. s. of Bloor	891 ft. s. of Bloor	"	1891	1897
Clifford	Stafford	Strachan	"	1887	1897
Clyde (now Baldwin.)	Spadina Av	Augusta Av	"	1887	1897
College	Dufferin	Lansdowne Av	"	1888	1896
College	Beverley	Spadina Av	"	1882	1892
College	McCaul	Beverley	"	1883	L'd by City
College	Spadina Av	Bathurst	"	1884	1894
College	McCaul	Yonge	"	1885	L'd by City
College	Ossington Av	Bathurst	"	1887	1897
College	Ossington Av	Dufferin	"	1887	1897
College, s. s.	Spadina Av	Augusta Av.	"	1890	1899
Coolmine Rd	Dundas	St. Anne's Rd.	"	1889	1899
Cottingham	Yonge	Avenue Rd	"	1886	1896
Cottingham	Rathnally Av	Poplar Plains Rd.	"	1889	1899
Cottingham	Avenue Rd	Rathnelly Av	"	1889	1899
Crawford	Queen	Defoe	"	1890	1900
Crocker Av	Bellwoods Av	Claremont	"	1890	1900
Cross	Gladstone	Beaconsfield	"	1888	1898
Dale Av.	McKenzie Av	Glen Rd. Bridge.	"	1889	1899
D'Arcy	McCaul	Spadina	"	1895	1900
Darling	North terminus	End of sewer	"	1891	1896
Davenport Rd	Hazelton Av	Avenue Rd	"	1889	1899
Davenport Pl.	Davenport Rd	End of street	"	1888	1898
Davies Av	Queen	Matilda	"	1893	1899
Dean	Wilton	200 ft. north	"	1886	1896
Defoe	Tecumseth	Niagara	"	1890	1900
DeGrassi	Queen	Gerrard	"	1892	1897
Delaware Av	College	Bloor	"	1886	1897
Delaware Av	Bloor	Van Horne	"	1891	1897

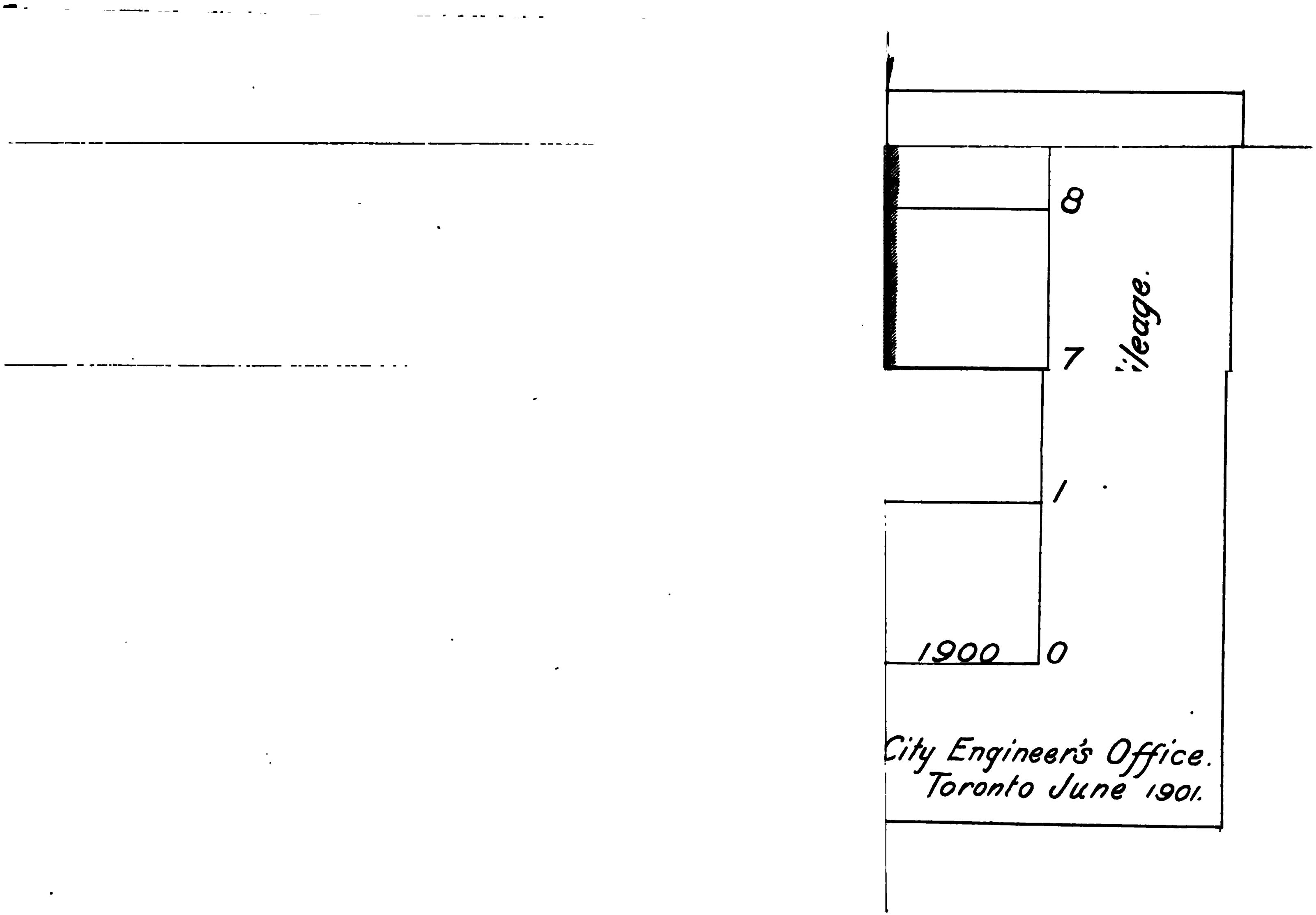
Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Dewson	Ossington Av.	Dovercourt Rd	C. B.	1890	1900
Dorset	King	Wellington	"	1883	1894
Dovercourt Rd.	College	Bloor	"	1889	1894
Dovercourt Rd.	Queen	Blair	"	1890	1899
Dowling	G. T. Ry	Hawthorne	"	Parkdale	1897
Draper	Front	Wellington Pl	"	1884	1894
Dufferin	Queen	G.W. Div. G.T.R.	"	1889	1898
Dunbar Rd	Elm Av	Hill	"	1890	1900
Dundas	Sorauren Av	Bloor	C. B. & Granite	1893	1898
Dupont	Bathurst	Manning Av	C. B.	1892	1897
Dupont	Avenue Rd	Bedford Rd	"	1890	1897
Earl	Sherbonrne	West terminus	Asphalt	1893	1898
Earnbridge	Birch	East terminus	C. B.	1888	1899
Eastern Av.	Trinity	Water	"	1889	1899
Edmund	Royce	C.P. Railway	"	1893	1898
Elm Av	Bridge	Glen Rd	"	1888	1899
Elmsley Pl.	St. Joseph	North terminus	"	1890	1900
Emily	Brock	Maude	"	1888	1899
Emily	St. Clarens Av.	Brock	"	1888	1899
Euclid	Bloor	Johnston	"	1890	1898
Euclid	Ulster	Bloor	"	1888	1899
Euclid Pl	Euclid Av	East terminus	"	1892	1899
Evans Av	Clinton	West terminus	"	1893	1898
Farley Av	Tecumseth	Niagara	"	1889	1898
Farley Av	Bathurst	Tecumseth	"	1889	1899
Frankish Av	Brock Av	Sheridan Av	"	1889	1899
Frizzel	Carlaw Av	Pape Av	"	1890	1900
Garden Av	Sorauren Av	Macdonnell Av	"	Parkdale	1897
Gerrard	Broadview Av.	Howland Rd	"	1888	1897
Gildersleeve Av.	Sumach	East end	"	1893	1899
Givens	Argyle	Halton	"	1889	1899
Gordon Av	Dale Av	Elm Av	"	1890	1899
Grafton Av	Roncesvalles Av	East end	"	1891	1899
Grant	Queen	North terminus	"	1890	1900
Halton	Shaw	Dundas	"	1892	1897
Hamburg Av.	Bloor	Union	"	1890	1899
Hamilton	Paul	Elliott	"	1890	1899
Hamilton (late Harris.)	Queen	Paul	"	1891	1896
Harbord	Markham	Bathurst	C. B. & Gravel.	1889	1899
Harrison	Ossington Av.	Lakeview Av	C. B.	1889	1899
Harvard	Roncesvalles	Callendar	"	1888	1898
Hayden	Church	East end	"	1890	1897
Hayden	Yonge	Church	"	1890	1900
Henderson	Clinton	Grace	"	1891	1898
Herrick	Bathurst	Lippincott	"	1892	1897

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Heward Av	Queen	Eastern Av	C. B	1889	1899
High Park Av	Roncesvalles	High Park	C. B. & Gravel.	1892	1899
Howie	Clark	North end	C. B	1889	1899
Howland Av	Barton	Wells	"	1889	1899
Howland Av	Wells	C.P. Railway	"	1890	1900
Howland Rd	Gerrard	North terminus	"	1888	1898
Huron	St. Patrick	Cecil	"	1887	1897
Huron	Cecil	College	"	1886	1897
Huron	Phœbe	Grange Av	"	1893	1898
Huron	Bernard	Dupont	"	1890	1900
Jameson Av	Dundas	Shirley	"	1888	1898
Jameson Av	Dundas	Bloor	"	1889	1899
Jarvis	Queen	Bloor	Asphalt	1889	1899
John	King	Queen	C. B	1890	1900
John	King	Front	Macadam	1895	1899
Jordan	Wellington	King	Asphalt	1891	1899
Kensington Cr	Park Rd	Huxley	C. B	1891	1896
King	Bathurst	Strachan Av	"	1883	1894
King	Sherbourne	Don River	"	1883	1894
King	Strachan Av	Armour	"	1891	1896
King	Dufferin	Queen	"	Parkdale	1897
King	Dufferin	3,000 ft. easterly.	Tamarac & Scoria.	1890	1899
Lane bet. St. Patrick and D'Arcy	Huron	Beverley	C. B	1892	1897
Lane s. of Pearl.	Near Simcoe		Cobble	1892	1897
Lane e. of Spadina Av.	Grange Av	St. Patrick	"	1892	1897
Lane bet. Duke and Duchess.	Ontario	West terminus	C. B.	1886	1896
Lane s. of Pearl.	Simcoe	York	"	1892	1897
Lane bet. Yonge and Victoria.	Gould	Wilton Av	Cobble	1887	1897
Lane bet. Yonge and Victoria.	Adelaide	106 ft. south	"	1892	1897
Lane 1st w. of Bay.	S. of Wellington		C. B	1889	1897
Lane bet. York and Simcoe.	N. of Pearl	Near Adelaide	"	1888	1898
Lane 1st n. of Queen.	Mutual	Jarvis	"	1888	1898
Lane n. of Wilton Cr.	Pembroke	George	"	1888	1898
Lane bet. Queen and Richmond	Church	East terminus	Cobble	1888	1898
Lane s. of Queen	Tecumseth	Niagara	"	1893	1898
Lane r'r of John	Adelaide	Lane near Arlington Hotel.	C. B	1893	1898
Lane e. of Bay	Wellington	214 ft. south	"	1888	1899

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Lane 1st e. of Bay.	Wellington	Melinda	Concrete	1895	1900
Lane n. of Foxley	Foxley	135 ft. north	C. B.	1889	1899
Lane 1st s. of Queen.	Simcoe	Duncan	"	1889	1899
Lennox	Roncesvalles	Easterly limit	"	Parkdale	1897
Leopold	Jameson Av	Lot 19	"	Parkdale	1897
Leopold	Dowling Av	Lot 19	"	Parkdale	1897
Lobb	Shaw	Crawford	"	1890	1900
Logan Av	Queen	Ashbridge's Bay	"	1889	1898
Logan Av	Queen	Gerrard	"	1889	1899
Logan Av	Gerrard	Danforth Av	"	1889	1899
Lombard	Church	Jarvis	"	1888	1898
Lowther Av	Brunswick Av.	Howland Av	"	1892	1898
Lowther Av	St. George	Spadina Rd	"	1890	1900
Lucas	Sorauren Av	Roncesvalles Av.	"	1892	1897
McGee	Queen	Eastern Av	"	1885	1896
McKenzie Av	Dale Av	Castle Frank	"	1886	1897
McMaster	Avenue Rd	Rathnelly Av	"	1890	1900
McPherson Av	Term. of pav't.	Avenue Rd	"	1889	1898
McPherson Av	Avenue Rd	Rathnelly Av	"	1890	1900
Manning Av	Arthur	Queen	"	1889	1898
Manning Av	Bloor	Hammond Pl	"	1890	1900
Mansfield Av	Manning Av	Clinton	"	1893	1898
Mansfield Av	Bellwoods Av.	Grace	"	1893	1899
Maple	Carlton	Sackville Pl	"	1888	1899
Marion	Sorauren Av	Fuller	"	1888	1898
Marion	Lansdowne Av.	Macdonnell	"	1891	1899
Markham	Arthur	759 ft. s. of College	"	1885	1896
Markham	Harbord	Bloor	"	1889	1898
Harlborough Av.	Yonge	West end	"	1889	1899
Massey	King	Wellington	"	1887	1897
Massey	King	Queen	"	1891	1897
Maude	Adelaide	Farley	"	1887	1897
Maude	Emily	Brock	"	1889	1899
Maynard Av	King	Leopold	"	Parkdale	1897
Melinda	Bay	Yonge	Asphalt	1891	1899
Metcalfe	Carlton	Winchester	C. B.	1885	1896
Middleton Av	Sheridan Av.	Brock Av	"	1889	1898
Millstone Lane.	York	East end	"	1889	1899
Mitchell Av	Tecumseth	Niagara	"	1889	1899
Morris	Spadina	Huron	"	1890	1900
Morse	Queen	Ashbridge's Bay	"	1886	1897
Montague Pl	Homewood Av.	West end	"	1893	1898
Munro	Queen	Gerard	"	1887	1897
Napier	Munro	Lane	"	1891	1896
New	Davenport Rd.	West end	"	1889	1899
Niagara	King	Queen	"	1887	1897
Noble	Brocton Rd.	East limit	"	Parkdale	1897
North Drive	Rosedale Rd	Woodland Av	C. B. & Gravel.	Yorkville	1897

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Northcote Av.	Queen	Afton Av	C. B.	1895	1900
Northumberland	Ossington Av.	Preston	"	1893	1898
O'Hara Av.	Present term. to	Ry. tracks	"	1892	1897
Olive	Bathurst	Palmerston Av	"	1893	1898
Ontario Pl	Ontario	270 ft. west	"	1886	1896
Ontario	Carlton	Howard	Asphalt	1890	1900
Orde	McCaul	Murray	C. B.	1889	1899
Ossington Av.	Bloor	C.P. Railway	"	1892	1897
Ossington Av.	Harrison	College	"	1888	1899
Ossington Pl.	Ossington Av.	West end	"	1889	1899
Ottawa	Shaftesbury Av	Summerhill Av.	"	1889	1899
Oxford	Augusta Av.	Spadina Av.	"	1895	1900
Palmerston Av.	Bloor	Union	"	1890	1899
Pape Av.	Queen	Danforth	"	1887	1897
Park Rd.	Woodland Av.	Rosedale Rd	C. B. & Gravel.	Yorkville	1897
Parkview Av.	Wellesley	North term	C. B.	1889	1899
Parliament	Wellesley	Howard	"	1888	1895
Parliament	Gerrard	Carlton	"	1888	1898
Pearson Av	Sorauren Av	Roncesvalles Av.	"	Parkdale	1897
Pearson Av	Sorauren Av	Macdonnell Av	"	1888	1898
Perth Av	Bloor	Royce Av	"	1893	1898
Peter	Front	King	"	1886	1897
Peter	King	Queen	"	1890	1900
Pinehill Rd	Rosedale Rd	West end	Macadam	1894	1899
Piper	York	East end	C. B.	1889	1899
Prospect	Rose Av	Ontario	"	1889	1899
Queen	Don Bridge	G.T.R. crossing	"	1888	1898
Rathnelly Av	Rathnelly Cr	McPherson Av.	"	1890	1900
Renfrew Pl	McCaul	East end	"	1889	1899
Richmond Pl	Richmond	South end	"	1886	1896
Robinson	Palmerston	Euclid	"	1886	1896
Roncesvalles Av	Queen	Dundas	"	1890	1900
Rose Av	Howard	Winchester	Asphalt	1892	1900
Roseberry Av	Bathurst	End	C. B	1894	1899
Rossin House La	York	East terminus	Cobble	1891	1897
Rosedale Rd.	Park Rd	North Drive	C. B. & Gravel.	Yorkville	1897
Rosedale Rd.	Roxborough Av	North Drive	C. B	1891	1897
Roxborough Av.	Yonge	1,328 ft. west	"	1892	1897
Roxborough Av.	Yonge	2,180 ft. easterly	"	1890	1900
Royce Av	Symington Av.	C. P. R.	"	1893	1898
Rush Lane	Esther	Portland	"	1890	1900
Rusholme Rd	College	Bloor	"	1890	1900
Russell	Robert	Spadina Av.	"	1889	1898
Ruth	Sorauren Av	Roncesvalles Av.	"	Parkdale	1899
Sackville.	Carlton	Winchester	"	1889	1898
Salisbury Av	Sackville	East terminus	"	1886	1897

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Salisbury Av.	Sackville	190 ft. west	C. B	1890	1899
Saulter	Queen	Eastern Av	“	1889	1899
Saunders	Sorauren Av	Fuller	“	1888	1898
Scott	Front	Colborne	Asphalt	1890	1900
Shannon	Ossington Av	Dovercourt Rd	C. B	1887	1897
Shaw	College	Bloor	“	1893	1898
Shaftesbury Av.	Yonge	1,100 ft. easterly.	“	1890	1899
Sheppard	Adelaide	Richmond	Macadam	1895	1899
Sherbourne	King	Queen	Asphalt	1890	1899
Sherbourne	Queen	Bloor	“	1889	1899
Shirley	Brock Av.	Lansdowne Av	C. B	1891	1898
Simcoe	Queen	Caer Howell	“	1889	1899
Simcoe	King	Queen	Asphalt	1890	1900
Simpson	Broadview Av.	East end	C. B	1889	1899
Smith	Broadview Av.	Logan Av	“	1890	1900
Soho	Queen	Phœbe	“	1889	1899
Sorauren Av	Wright Av	Dundas	“	1890	1899
South Drive	Crescent Rd	Centre Rd	Macadam	1894	1898
Spadina Av	College	Crescent	C. B. & Cobble.	1889	1898
Spadina Av	Queen	College	C. B	1884	1894
Spadina Av., e.s.	Cecil	Baldwin	“	1889	1899
Spencer Av	Huxley	Mississauga	“	1890	1900
Springhurst	King	Jameson	“	Parkdale	1897
Stafford	King	Defoe	“	1886	1896
Stafford	Defoe	Clifford	“	1887	1897
Stafford	King	Wellington	“	1890	1900
Stewart	Portland	Bathurst	“	1884	1894
St. Clarens Av	Emily	Dundas	“	1889	1898
St. Clarens Av	Dundas	Bloor	“	1890	1900
St. George	Bloor	Bernard Av	Asphalt	1889	1899
St. George	Bernard	Dupont	“	1890	1899
St. James Av	Ontario	Parliament	“	1890	1899
St. Joseph	St. Vincent	Queen's Park	C. B	1883	1894
Sullivan	Beverley	Spadina Av	“	1895	1900
Sumach	King	Eastern Av	“	1890	1899
Sydenham Lane (now Poulett).	Sydenham	South terminus	“	1890	1896
Thompson	Davies Av	Munro	“	1890	1900
Toronto	North of King.	Adelaide	Asphalt	1891	1897
Tranby Av.	Bedford Rd	157½ ft. east	C. B	1891	1896
Tranby Av.	Avenue Rd	West end	“	1889	1899
Triller	Queen	Harvard	“	1889	1899
Trinity	Mill	South terminus	“	1884	1895
Turner	Tecumseth	West end	“	1886	1896
Vanauley	Queen	High	“	1886	1897
Vanauley	St. Patrick	St. Andrews	“	1887	1897
Victoria Cr.	Dowling Av	Jameson Av	“	Parkdale	1897
Victoria Cr.	Dunn Av	Jameson Av	“	1893	1898
Victoria Lane	Queen	Shuter	Cobble	1890	1899
Victoria	King	Adelaide	Asphalt	1892	1900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Toronto June 1901.

Street.	From	To	Existing Pavement.	Date When Laid.	Date Final Assessm't Paid.
Virtue	Sorauren Av	East terminus	C. B.	1890	1900
Vermont	Bathurst	Manning Av	"	1891	1896
Walmer Rd	Castle Av	Bernard	"	1891	1897
Walmer Rd	Bernard Av	Dupont	"	1892	1899
Walter	Davenport Rd.	McMurrich	"	1891	1897
Walker Av	Yonge	West limit	"	1888	1899
Wardell	DeGrassi	North terminus	"	1889	1898
Wascana	Sumach	186 ft. easterly	"	1891	1896
Waterloo	Gladstone Av.	Dufferin	"	1886	1896
Wellesley	Sumach	300 ft. east	"	1889	1899
Wellington	Peter	Clarence Sq.	"	1886	1896
Wellington	Church	Yonge	Asphalt	1889	1899
Wellington	Bay	York	"	1891	1899
Westmoreland A	Durham	Union	C. B	1890	1900
Westmoreland A	Bloor	Durham	"	1890	1900
Wilkins Av	King	North terminus	"	1888	1899
Wilson	Queen	King	"	Parkdale	1897
Withrow Av	Broadview Av.	1,060 ft. east	"	1889	1898
Woodland	North Drive	Park Rd	C. B. & Gravel.	Yorkville	1897
Woolfrey	Broadview Av.	Bowden	C. B.	1888	1899
Wright Av	Sorauren Av	Roncesvalles Av.	"	Parkdale	1897
Wright Av	Macdonnell Av.	Sorauren Av	"	1891	1899
Wyatt Av	Sumach	River	"	1889	1898
Yonge	Davenport Rd.	Railway crossing.	"	1885	1897
York	Queen	King	"	1884	1895

BROKEN STONE ROADWAYS.

Two and one-half miles of macadam roadways were constructed during the year, which is only half the length constructed the previous year; all of these were on residential streets. On Woolsley Street, what is known as a tar macadam road, was laid. It is the first and only one that has been put down in this City, and has not been down long enough to enable us to form any positive opinion as to its ultimate success. However, we have been so favorably impressed with it that others of the same description have been recommended, though we are still in the experimental stage with regard to their construction we feel that we can make improvements in future works of this class. Tables Nos. 7 and 8 show details of the streets paved with macadam.

SCORIA BLOCK PAVEMENTS.

The portion of the roadway between the street railway tracks on York Street, and on College Street, from Yonge Street to McCaul Street, was paved with scoria blocks. The repaving of the track allowance on Parliament Street was commenced, but not completed owing to the lateness of the season. On all of these streets the track allowance portion of the roadway had been previously paved with asphalt, which had not given very good satisfaction, owing, perhaps, to the rails having been laid on wooden ties.

CEMENT CONCRETE AND BRICK SIDEWALKS.

The construction of permanent sidewalks has greatly increased. By referring to Table No. 2 it will be seen that 15.227 miles of cement concrete and 0.038 of a mile of brick sidewalks were laid in 1900, which is nearly treble the amount laid the previous year, and as regards concrete sidewalks in particular there was as much laid in 1900, as in all the seven preceding years together. See Table No. 7 for details of the permanent sidewalks constructed during the year.

DAY LABOR WORKS.

Last season twenty cement concrete sidewalks were constructed by day labor; for fifteen of which the City Engineer's tenders were the lowest received and the remaining five for different reasons were laid by day labor. Table No. 9 is a list of these different sidewalks, and shows their length, width and also the amount of the City's tender, the next lowest tender, and the actual cost of the work, etc. The last two columns show the loss or gain to the City, when the actual cost of the work is compared with the amount the work would have cost, if the City Engineer had not tendered, and the contracts had been awarded to the contractor submitting the lowest tender; besides there would have been the additional cost of inspection, if the work had been done by contract.

There was only one loss, and that was in connection with the walk on the north side of Bernard Avenue, between Avenue Road and Bedford Road, which was commenced in the autumn of 1899 and not completed until the end of October this year, being delayed through a dispute regarding the position of the telephone poles. After deducting the loss of $87.64 on Bernard Avenue, the net gain to the City through laying these different walks by day labor was $1,086.06 A list of the pavements constructed by day labor will be

TABLE No. 7.

ASPHALT.

Yonge	Alexander	Maitland	East	None			[illegible]		[illegible]	[illegible]
Bay	Temperance	Queen	East	None	12		323	9	June 15, 1900	J. H. McKnight.
Boswell Ave	Avenue Road	Bedford Road	Both	Concrete	12		323	10	July 24, 1900	A. Gardner & Co.
Spadina Road	Bloor	Lowther	Both	None	4		1,585	10	Aug. 28, 1900	"
St. George	Russell	Wilcox	West	None	6		1,662	10	Aug. 22, 1900	"
Lowther Ave	Admiral Road	St. George	North	None	6		576	10	Aug. 31, 1900	"
Tyndall Ave	Apt. 354 ft. s. of King	456 ft. further south	East	None	6		320	2	July 3, 1900	"
Terauley	College	84 ft. south	West	4-in. stone	6		456		Aug. 28, 1900	"
College	Terauley	35 ft. 6 in. west	South	4-in. stone	5		84	4	July 20, 1900	J. H. McKnight.
Willcock	Spadina Ave	Robert	North	None	9	9	54		July 20, 1900	"
King	Spadina Ave	Bathurst	North	None	6		424	4	July 24, 1900	W. R. Payne.
Queen's Park	131ft.6in.n.of St Albans	99 ft. 6 in. further north	East	None	6		1,914		Aug. 1, 1900	J. H. McKnight.
Queen's Park	N.e.limit of Mr Drynans	183 ft. east	North	None	6		99	6	Sept. 13, 1900	City of Toronto.
Peter	Richmond	Queen	East	None	6		183		Sept. 13, 1900	"
Church	Queen	Shuter	West	None	5		228		Oct. 5, 1900	A. Gardner & Co.
Bloor	St. George	Huron	South	None	8		564		Aug. 8, 1900	J. H. McKnight.
ouisa	Opposite T. Eaton	Co.'s Establishment	South	Concrete	10		[illegible]	[illegible]		"
ames	Opposite T. Eaton	Co.'s Establishment	East	Concrete	13	9	130	11		"
ames	Opposite T. Eaton	Co.'s (Stables)	West	Concrete	16	5	90	10		"
ork	Opposite W. R. John	sons & Co. (cor. York)	West	Concrete	11	6	84		Not completed	"
erauley	Queen	Apt. north	West	None						"
len Road	Opposite 85, 87 and 89		East	None	5		100	10		"
loor	Yonge	97 ft. west	North	None	14		97			"
ellesley Place	Opposite No. 2	Mr. R. Simpson's House	West	None	4		73			"
'Hara Ave	Opposite Gutta Percha	& Rubber Co.	West	None	4		28	7		"
herbourne	Opposite No. 34	Mr. Pearson's House	West	None	6		75			"
lm Ave	Opposite Mr. Hender	son's House	South	None	6		60	6		"
ernard Ave	S.w.cor. Admiral Road		South	None	5		166	6		"
roadview	Queen	19 ft. north	East	None	6		19	0		
							77,504	6		

BRICK SIDEWALKS.

ould	Mutual	Dalhousie	South	Stone, 4-in.	5		200	8	May 3, 1900	J. H. McKnight.
							200	8		

found in Table No. 10, which shows the class and length of pavement, the City's tender, the next lowest tender and the actual cost of the work, etc.

The last two columns in this table, as in Table No. 9, show the loss or gain, when the actual cost is compared with the lowest contractor's tender. By referring to it, it will be seen that Buchanan Street brick pavement is the only one on which there was a loss, the amount of which was $91.88. This can be accounted for through the work of laying the curb, having been started late in 1899, when, through the failure of the Canadian quarries to supply the demand, it was necessary to import stone curbing from the United States at a greater cost; and about the time the pavement was started in the spring, the 18 cent per hour resolution respecting laborers' wages passed Council, which raised the cost of labor 20 per cent., the work having been tendered for when the minimum rate of wages was 15 cents per hour.

All the other works in this table show gains, which aggregate, after deducting the $91.88 loss on Buchanan Street, $4,122.93.

The City's was the only tender for the paving of the lane between Dorset Street and John Street, so there is neither loss nor gain shown in the table; also, there is nothing shown in connection with the cobble stone pavement on Farquhar's Lane, as there was only one tender received besides the City's, and the contractor, through an error, made his price greater than he intended. The cost of each of these pavements was within our tendered price. Table No. 7 shows in detail all the pavements, roadways and permanent sidewalks constructed during the year.

Yours faithfully,

W. A. CLEMENT,

Assistant Engineer in charge of Roadways.

TABLE No. 8.

Class of Pavement.	Total sq. yds. in City.	Total miles in City.	Square yards laid 1900.	Miles laid in 1900.	Year first laid	Maximum grade of pavement.	Guaranteed period of years.	Maximum cost per sq. yd. 1900.	Minimum cost per sq. yd. 1900.	Average cost per sq. yd. 1900.
Asphalt	587,697	30.810	94,286	6.348	1888	3.03 in 100	10	2.80(heavy) 2.35 (light)	2.70(heavy) 2.15 (light)	2.75 (heavy) 2.25 (light)
Brick on concrete....	145,889	7.710	23,699	1.516	1893	4.80 in 100	5	1.82	1.64	1.73
Brick on broken stone	15,031	.842	7,409	0.516	1899		5	1.56	1.32	1.44
Brick on gravel......	32,009	2.218	606	0.057	1896		5	1.30	1.30	One only in 1900.
Cedar block	1,755,882	86.450	113,174	7.842	1881	7.18 in 100	1	63	49	54
*Gravel.....	76,862	5.340	5,348	0.303	1880	3.60 in 100	1	....	....	
†Scoria and granite....	40,122	.680	....	......	1884	5.16 in 100	1	....	... .	
Macadam	654,817	47.810	39,378	2.503	.. ..	6.65 in 100	1	1.25	71	Depth of stone varies from 8 to 16 inches

* One only in 1900, and it was the repairing of an old road.

† Street railway track allowance not included in total mileage.

TABLE No. 9.

CONCRETE SIDEWALKS CONSTRUCTED BY DAY LABOR DURING 1900.

Street.	Side.	From	To.	Length in ft.	Width in ft.	City's Tender per lin. ft.	Next Lowest Tender per lin ft.	Actual Cost of Work Included in Tender per lin. ft.	Cost of Work not Included in Tender.	Cost of Work Included in Tender.	Total Cost of Work Exclusive of Interest on Money.	Difference Betw'en City's and Next Low'st Tender	
												Loss.	Gain.
				ft. in.		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Bernard Ave ..	S	Avenue Rd....	Bedford Rd .	809 11	5	0 62	0 68	0 59	73 69	477 54	551 23	.....	73 20
" ..	N	"	"	807 8	6	70	79	90	59 35	725 69	785 04	87 64	....
College	S	Beverley	Huron	589 6	6	74	80	67¼	7 89	395 89	403 78	.....	75 71
Cecil	N	"	"	580 5	5	62	65	51	171 88	293 97	465 85	.....	83 30
"	N	Huron	Spadina Ave.	403 2	5	62	64	62½	29 54	251 81	281 35	.....	6 22
Gerrard.......	N	Berkeley......	Parliament..	339 3	5	No t'nd'r	No t'nd'r	1 35½	No t'nd'r	No t'nd'r	459 56	.....	....
"	N	Seaton........	Sherbourne..	387 6	5	No t'nd'r	No t'nd'r	1 41	No t'nd'r	No t'nd'r	545 56	.....	....
Glucester......	S	Church........	Jarvis	651 1	5	1 30	1 35	94	136 64	611 41	748 05	.....	267 55
Huron........	W	Bloor.........	Lowther Ave.	818 9	6	74	80	66	....	539 78	539 78	.....	115 22
Howland Ave..	B	"	Barton Ave..	2,119 0	5	67	68	63	144 74	1,230 89	1,375 63	.....	210 03
Huron	W	Russell..	Bloor.......	2,427 2	6	67	68	66½	38 53	1,610 39	1,648 92	.....	40 08
King..........	S	Opp. Stanley	Park........	388 6	6	No t'nd'r	No t'nd'r	68¼	No t'nd'r	No t'nd'r	264 89	.....	....
Lowther Ave ..	N	Madison Ave..	Spadina Ave.	276 6	5	1 27	1 30	95	....	262 97	262 97	.....	96 48
Queen's Park Crescent ...	E	131 ft. 6 in. N. of St. Albans	99 ft. 6 in. N.	99 6	6	No t'nd'r	No t'nd'r	73¾	No t'nd'r	No t'nd'r	73 48	.....	....
Queen's Park Crescent	..	E. limit of Drynans	183 ft. E.. .	183 0	6	No t'nd'r	No t'nd'r	66	No t'nd'r	No t'nd'r	120 79	.....	....
Rose Ave.	B	Winchester....	Prospect....	853 2	6	70	71	69½	91 52	591 34	682 86	.....	14 41
South Drive...	N	In front house	No. 2.......	188 6	4	60	65	61¾	....	116 37	116 37	.....	6 15
Simcoe........	E	Front.	Station.	157 4	12	2 00	2 16	2 11	12 07	331 76	343 83	.....	8 08
St. George	W	House No. 92..	House No. 112	520 1	6	74	80	65	....	338 29	338 29	.....	77 78
Walmer Rd ...	E	Bloor.........	N. lm't No. 13	769 4	6	74	82	69	2 87	531 36	534 23	.....	99 49
Totals....	..	......	....	....	..	....	....	....	....	....	....	87 64	1173 70

TABLE No. 10.

TABLE SHOWING COST OF PAVEMENTS CONSTRUCTED BY DAY LABOR DURING THE YEAR 1900.

Street.	From	To	Class of Pavement.	Length in Feet.	City's Tender.	Next Lowest Tender.	Actual Cost of Work Included in Tender.	Cost of Work not Included in Tender.	Total Cost of Work Exclusive of Interest on Money.	Difference Between City's Tender and the Next Lowest Tender.	
										Loss.	Gain.
				Feet.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Atkins Av	Brock Av	East end	Brick	303	1,055 00	1,193 00	869 10	60 30	929 40		323 90
Buchanan	Yonge	Teraulay	Brick	704	4,049 00	4,140 00	4,231 88	31 96	4,263 84	91 88	
Davenport Rd.	Avenue Rd.	636 ft. west	Macadam	636	2,800 00	2,994 00	2,821 49	114 33	2,935 82		172 51
*Farquhar's La.	Front	Esplanade	Cobble Stone	360	748 00	1,666 00	704 54	99 57	804 11		
Grosvenor	Yonge	Queen's Park	Gravel	1,602	1,600 00	1,808 44	1,009 16	170 34	1,179 50		799 28
Lane 1st south of King.	Dorset	John	Brick	194	888 00	No t'nd'r	863 48	54 40	917 88		
Lane 1st south of Front.	Yonge	Scott	Brick	291	1,540 00	1,766 00	1,478 47	18 11	1,496 58		287 53
McDonnell Sq.	Bathurst	Defoe	Macadam	523	940 00	997 00	746 37		746 37		250 63
Spadina Cr.	N.s. Crescent	College	Brick	1,682	1,957 00	2,003 00	1,523 54		1,523 54		479 46
*Sherbourne	Bridge	South Drive.	Concrete	1,076	1,621 00	3,097 00	1,175 23		1,175 23		870 77
Spadina Av.	King	Front	Macadam	964	7,351 00	7,865 00	6,834 27	338 40	7,172 67		1,030 73
										91 88	4,214 81

* The number of square yards of pavement on Sherbourne Street was reduced so that the City tender would have been $1,071, and the next lowest tender $2,046 instead of $1,621 and $3,097 respectively, as stated above.

The prices for the pavement on Farquhar's Lane cannot be compared, as there was only one other tenderer and the contractor made an error in his tender.

TABLE

SHOWING ROADWAYS, PAVEMENTS, SEWERS AND SIDEWALKS RECOMMENDED AS LOCAL IMPROVEMENTS FROM 1890 TO 1900 INCLUSIVE, AND ALSO NUMBER OF RECOMMENDATIONS PETITIONED AGAINST.

Roadways.

Year.	Roadways.	Petitioned Against.
1890	84	5
1891	67	3
1892	87	2
1893	113	6
1894	20	9
1895	75	32
1896	64	33
1897	113	31
1898	136	27
1899	197	55
1900	132	34
Total	1,088	237

Sewers.

Year.	Sewers.	Petitioned Against.
1890	121	..
1891	81	1
1892	28	..
1893	13	..
1894	7	..
1895	3	2
1896	5	2
1897	3	..
1898	3	..
1899	13	1
1900	14	1
Total	291	7

Sidewalks.

Year.	Wooden Sidewalks.	Permanent Sidewalks.	Petitioned Against.
1890	370	37	..
1891	214	14	1
1892	219	7	..
1893	179	1	..
1894	147	9	7
1895	198	18	40
1896	108	12	30
1897	116	27	41
1898	344	64	71
1899	437	88	63
1900	408	145	81
Totals	2,740	422	334

SEWERS, DRAINS AND SPECIAL WORK.

Toronto, December 31st, 1900.

Mr. C. H. Rust, Esq.,
City Engineer.

Dear Sir,—I beg to submit the following report of the work performed by this Department during the year ending 31st December, 1900.

During the year the following sewers were constructed:

12-in. tile pipe	4,220	lin. feet.
15-in. tile pipe	277	"
15-in. tile pipe relaid in concrete	566	"
15-in. tile pipe relaid	200	"
2-ft. x 3-ft. brick sewer	897	"

There are 232½ miles of sewers in the City.

During the year there were

76 new manholes built.
173 manholes repaired.
661 new gullies built.
313 gullies repaired.
72 miles of sewers were flushed and cleaned.

The following is a list of the plans made or revised during the year:

122 drawings and day labor or contract plans.
92 tracings.
382 sewer plans revised.

There are at present 66 flush tanks in the City, which are inspected every week. All are in good working order.

QUEEN STREET CULVERT, SIX-FOOT ARCH.

The old stone culvert across Queen Street at Ashbridge's Estate, east of Greenwoods Avenue, was found in a very bad condition, some of the roof having fallen in. It was reconstructed for a length of 42 feet under the car tracks, at a cost of about $325.

GENERAL SEWER REPAIRS.

During the year many short pieces of pipe sewers, which were thought to be defective, were uncovered and repaired.

In most cases the joints were found to need cementing, while in some cases the pipes were cracked or broken. In repairing all pipe sewers over 12 inches in diameter an arch of concrete is now added to strengthen the pipe.

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MULA ÷ GAL^{ns} PER MIN =

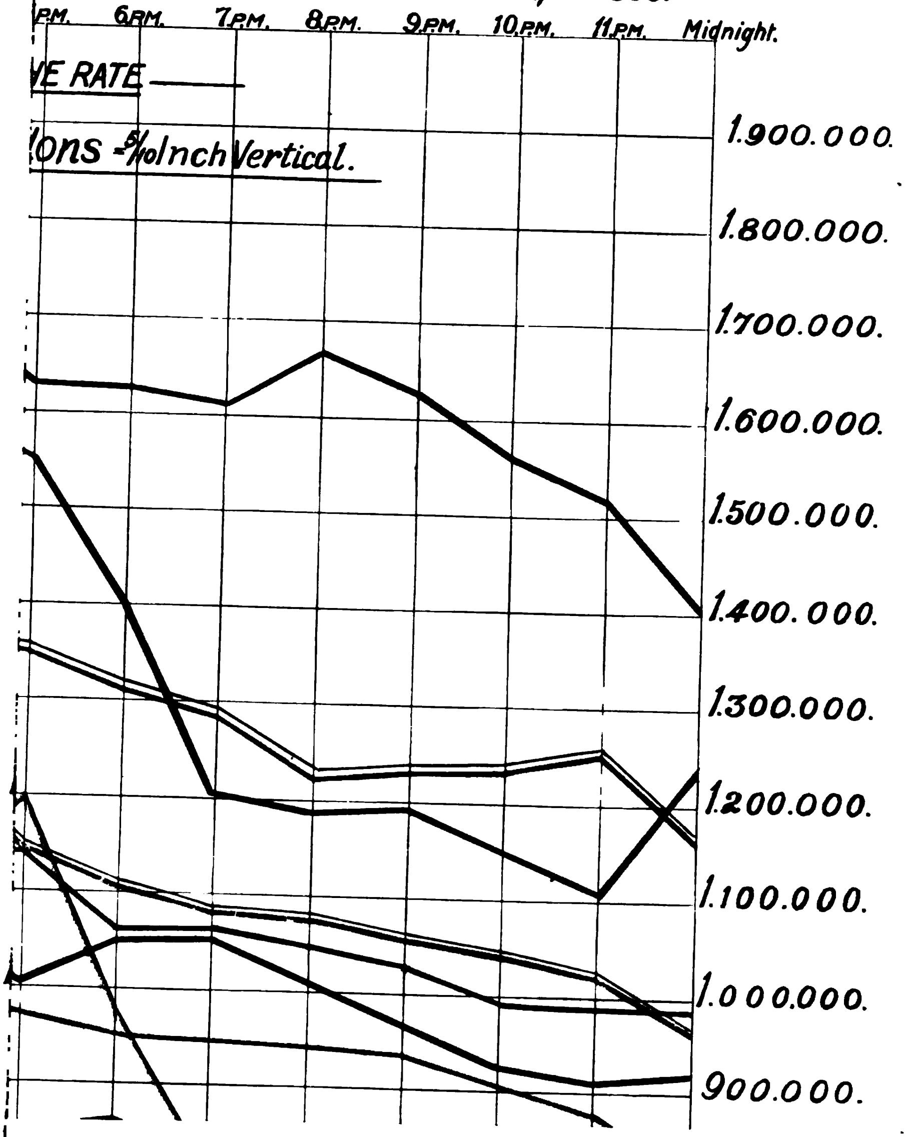
AM.	11. AM.	NOON.	1. PM.	AVE: GALLONS PER DAY.		DAILY FLOW PER HEAD.	DAILY FLOW PER ACRE.	SEWER CAPACITY RUNNING FULL.	DRY FLOW CAPAC.
7.824	333.144	326.520	326.520	306	544	85 $\frac{3}{10}$	929	18.630.000	$\frac{1}{21}$
2.320	652.320	651.872	652.320	577	422	85 $\frac{6}{10}$	1618	42.604.000	$\frac{1}{74}$
9.136	5.148.864	5.168.592	5.188.320	4686	494	102 $\frac{4}{10}$	2219	217.467.000	$\frac{1}{46}$
7.776	1.008.144	1.042.848	1.042.848	921	548	100 $\frac{6}{10}$	4291	39.970.000	$\frac{1}{44}$
7.120	1.797.120	1.776.096	1.780.632	1456	494	88 $\frac{1}{10}$	4213	95.276.000	$\frac{1}{66}$
01.440	1.891.440	1.871.856	1.871.856	1575	052	95 $\frac{8}{10}$	2721	61.236.000	$\frac{1}{39}$
4.912	373.968	369.136	311.616	202	632	724	6987	15.480.000	$\frac{1}{76}$
50.000	4.112.856	4.042.800	3.965.544	3.302	088	179 $\frac{2}{10}$	5844	45.864.000	$\frac{1}{14}$
77.568	1.238.400	1.277.568	1.199.520	880	122	135 $\frac{6}{10}$	5500	37.800.000	$\frac{1}{43}$
5.160	1.101.076	1.204.402	1.231.200	989	069	137	6868	62.838.000	$\frac{1}{64}$
96.922	412.157	408.744	578.533	369	296	91 $\frac{1}{10}$	3211	44.100.000	$\frac{1}{119}$
15.984	476.136	421.200	402.120	367	616	209 $\frac{3}{10}$	8549	15.687.000	$\frac{1}{42}$
83.200	1.375.229	1.385.971	1.350.173	1268	499	96 $\frac{5}{10}$	5243	45.144.000	$\frac{1}{36}$
7.746	1.154.117	1.159.764	1.204.207	1.067	592	89	4394	21.906.000	$\frac{1}{20}$
99.676	311.696	255.665	257.427	280	627	328 $\frac{5}{10}$	7439	6.948.000	$\frac{1}{30}$
3.017	97.646	105.710	92.318	68	249	204 $\frac{5}{10}$	3329	2.736.000	$\frac{1}{40}$
1.657	131.313	136.224	153.242	115	688	52 $\frac{3}{10}$	2754	14.346.000	$\frac{1}{124}$
71.390	1.168.836	1.168.834	1.181.448	1.052	952	130 $\frac{5}{10}$	1389	116.469.000	$\frac{1}{116}$
65.332	67.500	79.757	88.697	76	406	81 $\frac{8}{10}$	1736	9.171.000	$\frac{1}{134}$
15.091	15.091	13.867	13.867	12	898	58 $\frac{5}{10}$	941	2.910.000	$\frac{1}{225}$
28.109	26.265	21.600	26.791	20	695	49 $\frac{5}{10}$	1380	3.207.000	$\frac{1}{155}$
52.731	31.161	29.995	32.731	29	633	61 $\frac{7}{10}$	1323	2.910.000	$\frac{1}{98}$
13.603	42.552	42.652	44.611	43	430	119	3419	3.486.000	$\frac{1}{80}$
12.485	883.006	867.413	867.413	807	449	82 $\frac{8}{10}$	891	7.650.000	$\frac{1}{9}$
10.548	10.022	10.440	10.965	8	900	96 $\frac{7}{10}$	890	16.290.000	$\frac{1}{1810}$
30.747	23.860.056	23.809.426	23.634.891	20.427	395				
71.851	371.528	370.740	368.073	318	078				
52.596	24.231.584	24.180.166	24.002.964	20.745	473	109 $\frac{5}{10}$	2794		

TORONTO JUNCTION

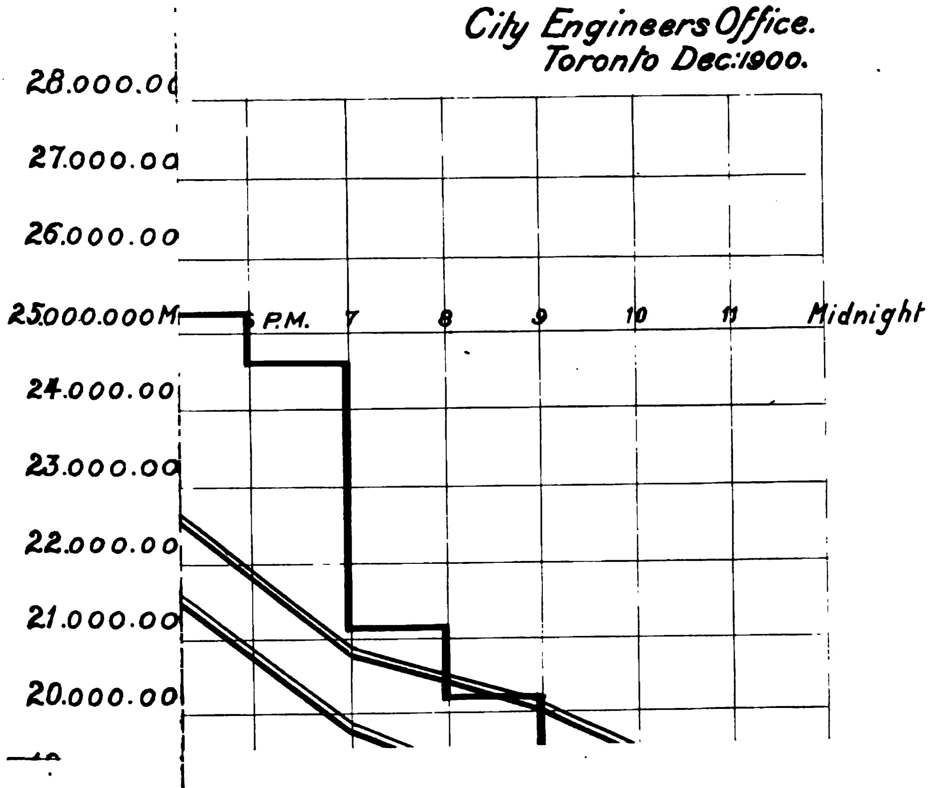
2.964	504.144	498.857	491.134	489	239	12 $\frac{6}{10}$			
4.188	64.188	64.188	64.188	65	424				
8.200	8.200	8.200	12.800	20	553				
12.779	251.381	262.080	262.080	322	706	40.			
58.131	827.913	833.305	830.202	897	922				
24.467	23.403.671	23.346.861	23.172.712	19.647	551	105 $\frac{2}{10}$	2673.		

C.B. SMITH C.E. TORONTO MAR.

Wm Mc G. FLIGHT. DEL



City Engineers Office.
Toronto April. 1900.


City Engineers Office.
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FILTER BED CROSS SECTIONS.

In the preparation of sewage disposal plans, a large amount of ground north, east and south of the Woodbine race course, and south of Queen Street from Leslie Street to Woodbine, and at the Old Fort and the Garrison Creek Sewer outlet has been cross-sectioned, and plans made showing contours. These cross-sections have been carried out into the Lake or Ashbridge's Bay, and soundings taken to hard bottom.

MEASURING FLOW OF SEWAGE.

As a preliminary to designing filter beds for sewage disposal, weirs were placed in each main sewer in the City near its outlet, and accurate measurements taken of the dry weather flow of sewage, for each hour of the day and night. The results are given in detail in the accompanying charts, the general result being a gross dry weather flow of sewage of 20,745,000 imperial gallons per day, or deducting water received from West Toronto Junction sewers, or County water taken in at the City boundary of 898,000 imperial gallons per day, leaving a net amount of 19,847,000 imperial gallons of City sewage per day.

LOCATING MANHOLES AND CULVERTS.

Many of the sewers built from twenty to fifty years ago were not fully recorded as to structures, position or depth, and during the year measurements have been taken on 351 streets or portions of streets, obtaining information which has been placed on the sewer plans.

PRIVATE DRAINS.

The following is a statement of the private drains constructed during the year to December 31st, inclusive :

Month.	6-in. ft.	9-in. ft.	12-in. ft.
January	353	33	....
February	327½	33	....
March	715	66	....
April	2,468	132	....
May	1,595½	....	....
June	1,399	33	....
July	1,289	181	33
August	1,426	182	....
September	1,312	33	....
October	1,884	226	....
November	1,655½	86	....
December	711	20	....
Total	15,135½	1,025	33

In addition to the above, 52 private drains were repaired and 18 private drains were flushed out during the year.

The attached schedules and diagrams give all the information relating to cement tests made in this Department from July 1st, 1899, to July 1st, 1900. The brick testing is done by this Department; also all other special Engineering work, exclusive of Roadway work, was performed by the staff of this Department.

SPECIAL WORK.

QUEEN STREET BRIDGE ABUTMENTS.

These abutments were practically completed in 1899, the last work being done on January 9th, 1900.

TAKING DOWN QUEEN STREET TEMPORARY BRIDGE, ETC.

In August, when traffic was opened on the new Queen Street Bridge over the Don River, the temporary bridge immediately to the south of it was taken down, the piles pulled out, the C. P. R. station moved back to a position close to the new bridge and platforms rebuilt. New gates were contracted for with Piper & Sons for protecting Queen Street at the crossing of the railway tracks at the west end of the bridge, and were erected by them.

KEATING'S CHANNEL PILING.

The sheet piling on the north side of Keating's Channel, from the Don Rowing Club building eastward, was extended 165 feet toward Keating's Channel Bridge. There is about 200 feet still to do at this point on the north side.

DON RIVER PILING AT QUEEN STREET.

The sheet piling on both sides of the Don River at Queen Street has been completed, a length of about 250 feet having been constructed at a cost of $1,500.

DREDGING SEWAGE DEPOSITS OUT OF SLIPS.

The following dredging has been done by the contractor for slip dredging during the season:

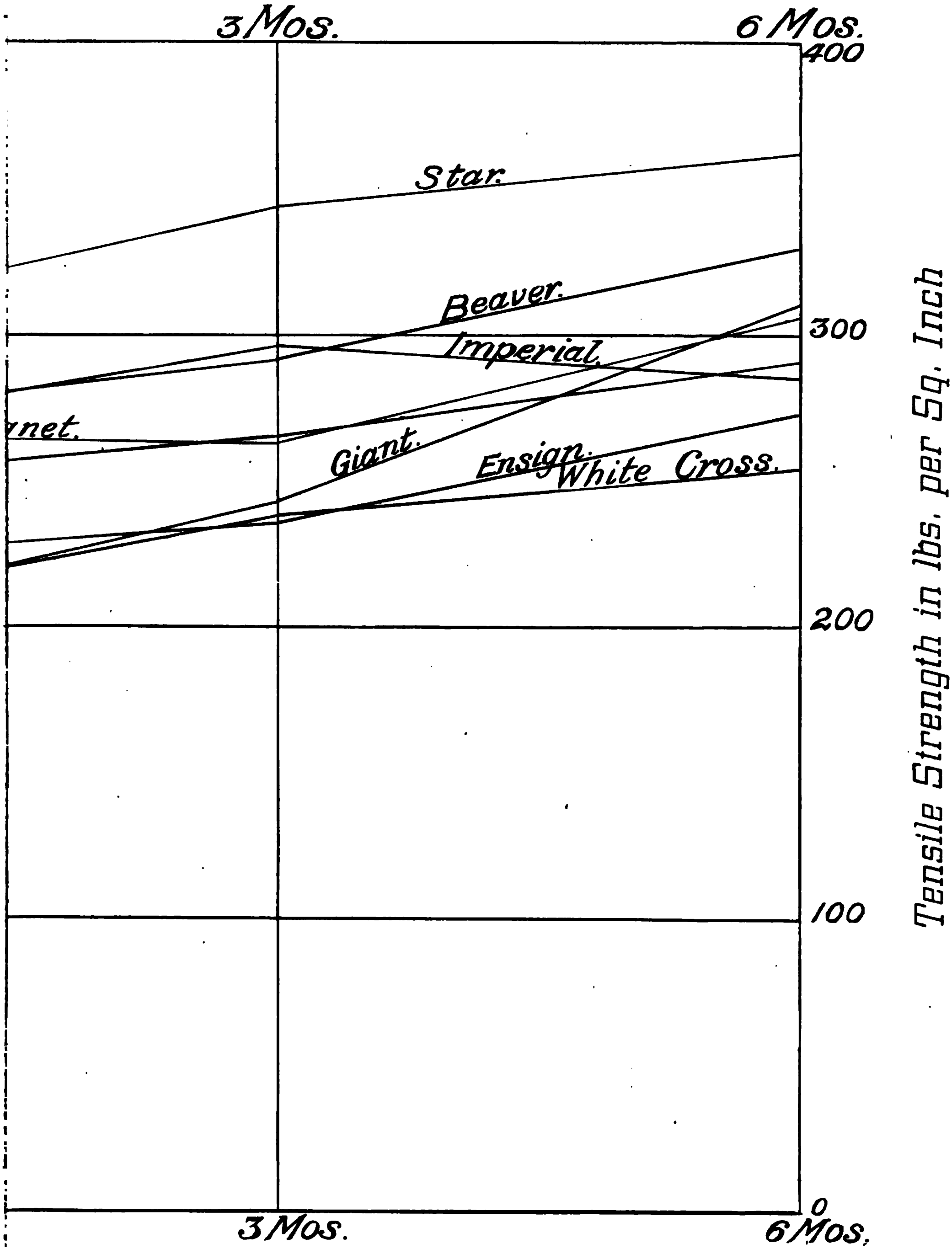
Queen's Wharf channel (Bathurst Street sewer).
Yonge Street sewer outlet.
Church Street slip.
Jarvis Street slip.
Entrance to Sherbourne Street slip
Sherbourne Street slip.
Entrance to Berkeley Street slip.
Berkeley Street slip (two-thirds done).

Condensed Table of Cement Tests

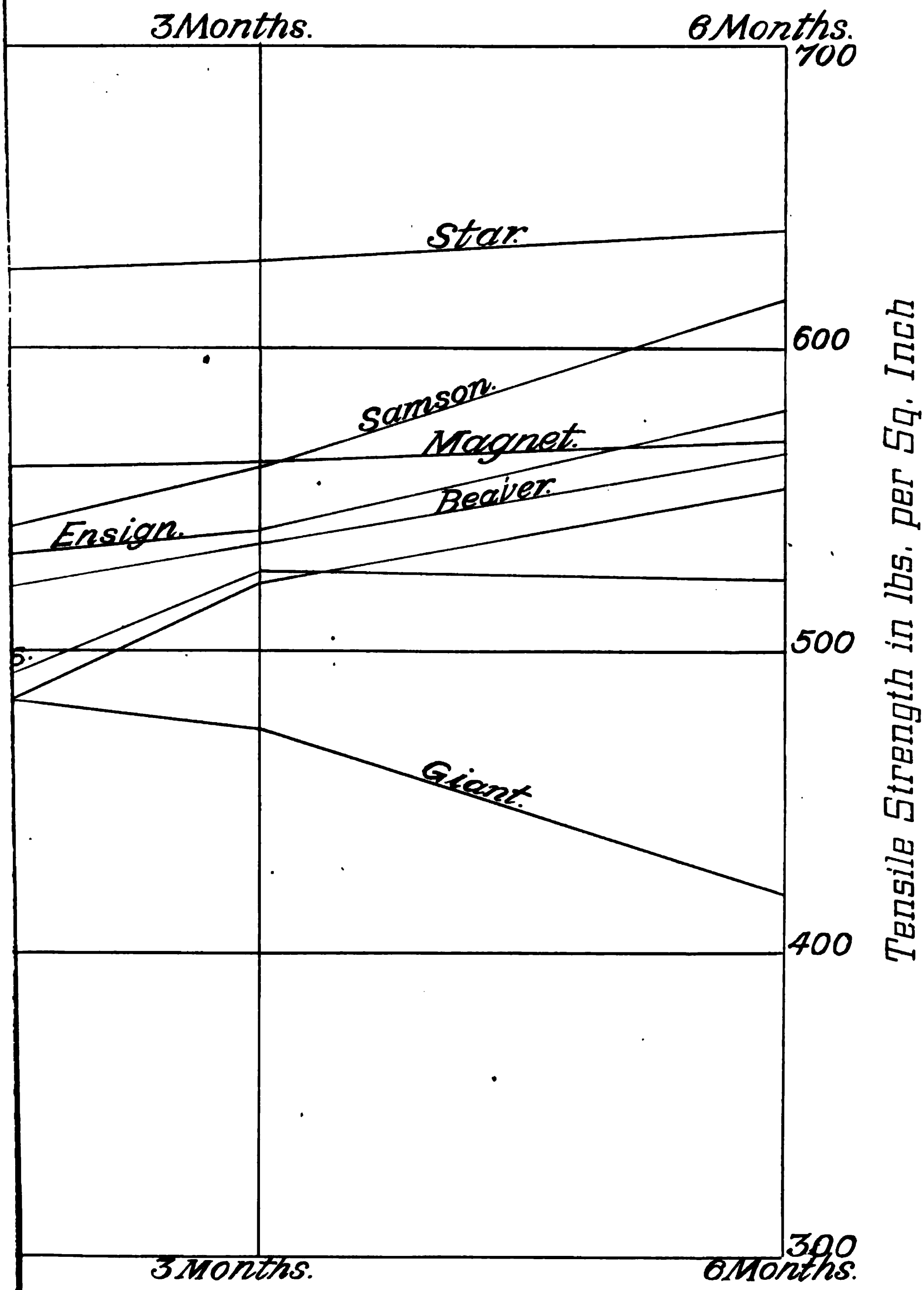
July 1/99 to July 1/00

BRAND OF CEMENT	No. of Samples Tested	Average Specific Gravity	Result of Blowing Test	RESIDUE % Sieves, Meshes per inch			Average % of Water	TENSILE STRENGTH NEAT					Average % of Water	TENSILE STRENGTH 3—1				
				50	70	100		1 Week	1 Mo.	2 Mos.	3 Mos.	6 Mos.		1 Week	1 Mo.	2 Mos.	3 Mos.	6 Mos.
Star	40	3.08	Good	0.0	0.6	1.7	24.6	509	548	623	629	639	11.9	186	249	303	344	362
Beaver	6	3.07	"	0.0	0.7	2.2	24.5	403	466	504	535	565	11.8	130	219	270	290	329
Samson	8	3.09	"	0.7	2.6	3.8	24.8	409	494	517	559	615	11.9	145	213	247	264	291
Ensign	16	2.95	"	0.0	0.0	0.3	24.5	366	450	521	538	580	11.7	122	179	222	236	274
White Cross	6	3.05	Fair	0.6	8.2	13.5	25.7	336	427	454	527	523	12.0	116	147	203	237	255
Imperial	4	3.06	Good	0.0	0.3	2.4	38.0	432	427	441	524	554	14.0	163	239	265	296	287
Magnet	3	2.92	"	0.0	0.0	0.3	25.0	387	484	558	560	570	12.0	136	232	265	263	306
Giant	1	2.97	"	0.0	3.0	7.0	26.0	510	597	495	476	420	12.0	136	217	200	242	310

Tensile Strength in lbs. per Sq. Inch

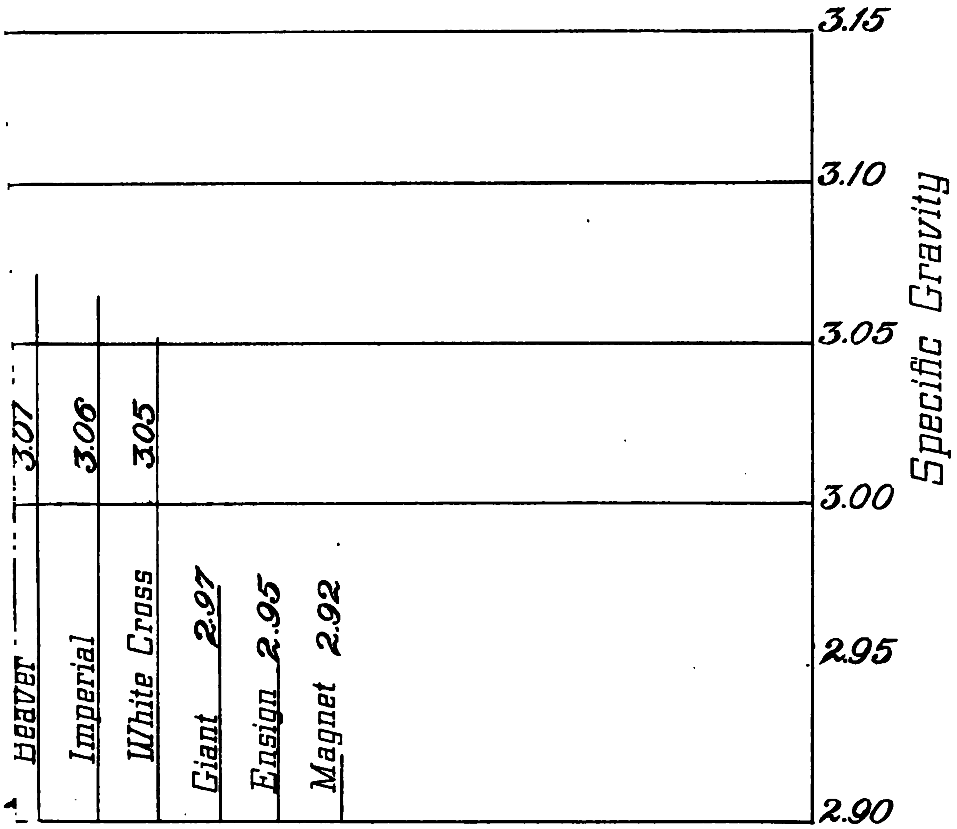


City Engineer's Office,
Toronto, May, 1901.



City Engineer's Office,
Toronto, May, 1901.

Cement
cific Gravity Diagram
1900



ept "Ensign"
land Cements

City Engineer's Office,
Toronto, May, 1901.

The excessive amount of material necessary to remove to obtain an entrance for the dredge to Sherbourne Street and Berkeley Street slips has increased the cost of the work this year to a total of $7,500.

SAND PUMP DREDGING.

The sand pump "Daniel Lamb" has been continuously engaged during the season. Shields' Cut, Ashbridge's Bay, and Keating's Channel were both deepened. The remainder of the season was spent at the Island doing the following work :

Widening Clandeboye Avenue and Long Pond east of Hallam's Bridge; cutting channels toward the Yacht Club from Clandeboye Avenue, and opening up a channel and filling in low land at Blockhouse Bay. The amount of material removed during the season was 70,000 cubic yards, at a cost of slightly over 7 cents per cubic yard.

The dredge has just been put on the dry dock and thoroughly overhauled, recaulked and laid up for the season.

DREDGING BERTRAM'S SLIP.

Under instructions, an agreement was entered into with contractor Simpson on November 26th for dredging out the slip at Bertram's ship yard, which was about 7½ feet deep on an average. This had been dredged to a depth of 10 feet at zero water for a length of 400 feet and width of 65 feet. The material was a mixture of rock boulders and clay, and the dredging was done to the solid rock; about 2,500 cubic yards in all was taken out.

STREET RAILWAY RECORDS.

During the year, complete records have twice been taken from 5.30 a.m. to midnight of the traffic on the various car routes of the Toronto Railway Co., and returns made showing number of cars, number of passengers sitting, number of passengers standing, etc. In addition to this, complete records of the actual schedule under which the cars on various routes were running have been taken quite often, and returns made showing whether or not it is in conformity with the schedule recommended by the City Engineer and adopted by Council. Various other miscellaneous records have been taken referring to proposed changes of routes or complaints made by citizens, etc. This has necessitated the employment of from one to twenty men for a large portion of the year.

Yours faithfully,

CECIL B. SMITH,

Assistant Engineer.

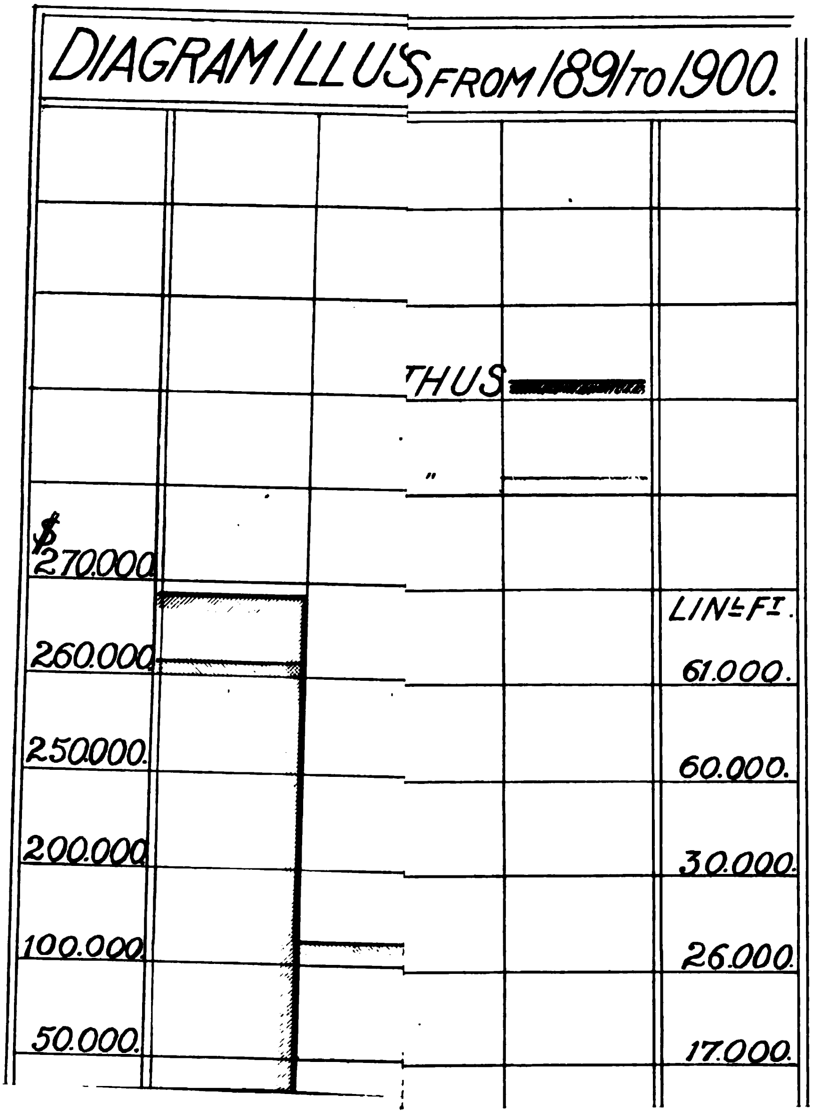
MAXIMUM AND MINIMUM TEMPERATURES, AND RAINFALL AND SNOWFALL.

Toronto, 1900.

—	Temperature.		Precipitation.	
	Maxi'um	Mini'um	Rain.	Snow.
	°	°	in.	in.
January	46.0	0.0	0.470	14.7
February	48.0	—9.6	2.140	30.7
March	43.8	—3.0	1.620	18.3
April	70.7	21.3	1.830	*
May	87.5	30.5	0.995	*
June	89.4	44.4	2.425	....
July	94.4	48.1	2.730	....
August	98.0	51.3	2.745	....
September	91.7	44.0	1.425	....
October	83.0	25.9	2.115	....
November	64.8	14.1	3.025	8.7
December	48.4	—1.5	0.610	2.2
Year	98.0 6th Aug.	—9.6 26th Feb	22.130	74.6

* Too small to measure.

Observatory, Toronto,
18th May, 1901.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BRIDGES.

City Engineer's Office,
Toronto, December 31st, 1900.

C. H. Rust, Esq.,
City Engineer.

Dear Sir,—The following is a report of the bridge work done during the past year:

Cherry Street Bridge.—In place of the crib in the centre of the river, that was overturned in the spring of 1899, a new structure has been erected consisting of close piling and walings, with a portion of the old crib. This structure has been securely placed and brought up to the original level, as a support to the end of the bridge when opened, and attached by longitudinal timbers to the centre crib. A cutwater face has been constructed to this crib to break the ice when freshets occur. A new wearing course has been laid on the deck, the land cribs repaired, and the turning machinery overhauled and adjusted.

Glen Road Bridge.—The repairs to and re-construction of the deck of this bridge, commenced in 1899, were completed in the month of January, 1900, although reported as complete in the report of 1899. One of the diagonal braces on the south trestle on Rosedale Drive was broken and was taken out, repaired and fixed.

Lamb's Draw Bridge.—This bridge requires constant attention, having served the purpose for which it was erected, and should be replaced by a permanent steel structure. I recommend that a bridge of about 40 ft. span, with 20 feet between main trusses, be constructed, which could be raised so as to give a clear headway of 30 feet, and parallelled to the surface of the stream. Considerable repairs had to be made during the year to keep the structure in working order, adjustment oftentimes causing more trouble than repairs or renewals.

Danforth Avenue Bridge.—This structure which carries the traffic over a small stream near Jones Avenue, has been entirely reconstructed. It is now in three spans, a centre one of 20 feet, and two outer ones of 15 feet each. A new hand-railing was provided and the bridge is now in good condition.

STRACHAN AVENUE BRIDGES.—These bridges have been overhauled, the mudsills and posts examined and renewed where necessary, a new wearing course laid on the deck of the south bridge and the hand-railing and sidewalks repaired. On or about the 22nd September the sidewalk on the east side of the north bridge caught fire, but it was extinguished before much damage was done, a few sidewalk planks only being destroyed, which were replaced. On the 1st December, some of the stringers and the bottom chord of the east truss of the north bridge were destroyed by an overloaded train. New trusses and one new needle beam were put in, and the stringers and planking were replaced by Grand Trunk Railway men. While the deck was uncovered for these repairs, I found the underplanking and stringers very much decayed. The entire decks of these bridges must be replaced during the coming season.

CASTLE FRANK BRIDGE.—The supports of this bridge at the north end were found to be much decayed. The decayed part was removed and replaced. Some slight repairs were made to the other portions of the bridge.

WINCHESTER STREET BRIDGE.—During the spring freshets the scour of the river had undermined the piling and carried the earth filling away at the east end of the bridge, and in the early part of June the piles had bulged towards the water, and let down that part of the deck. A temporary ramp was put in so as to keep the traffic going until new piles could be procured. A contract was let to Messrs. Medlar & Arnot, who drove a close row of piles and secured them with iron rods from walings to back piles and logs. The bridge was raised to its proper position and newly planked, so as to make the deck planking independent of the earth filling. It was extended for about 25 feet eastward and supported on wood sills sunk into the road bed.

DUPONT STREET CULVERT.—A new plank covering was placed on this culvert, but the substructure must be renewed in the near future.

ISLAND PARK BRIDGE.—A new bridge was built in June over the channel at Clandeboye Avenue. It is merely a foot-bridge and is 104 feet long by 6 feet wide, and is in three spans, a centre one of 30 feet and two outer spans of 25 feet each, with an extension of the deck and hand-railing 12 feet further on each end. It is built on piles and bents, and with a little paint and constant attention it may last some 8 or 10 years. Some slight repairs were made to Hallam's bridge, a few worn planks being taken up and replaced with new ones.

DUNDAS STREET BRIDGE. —This bridge did not require any repairs this season, with the exception of some adjustment to the hand railing. It will require replanking in the coming season.

CRAWFORD STREET BRIDGE.—This bridge has been thoroughly examined and a new 2 inch wearing course put on the roadway. The bents were repaired where necessary, also sidewalks and hand-railing. The stringers are in only medium condition and will need replacing in the near future.

SHAW STREET BRIDGE.—This bridge was found to be in a very poor condition, the stringers being so much decayed on the top side that they would not hold the nails. An entirely new set of stringers were put in alongside and nailed to the old stringers to reinforce them, and new under and lower deck planks 2 inches thick were laid. The mudsills under bents were all examined and new ones put in where required, also all verticals cut where decayed and new pieces inserted. The bracings were all examined and strengthened.

GERRARD STREET BRIDGE.—As the devil strip on this bridge was of the old width, viz., 3 feet between rails, in compliance with the wishes of the Street Railway Co. it was widened, and the double planking in the strip renewed. The deck was sawn through on the north side of the north track and on the south side of the south track, close to the 12 inch stringers supporting the rails and the planking from the devil strip, having been removed, each track was forced over by the screw jacks until the sawn edge of planking was hard against the rails ; they were then re-nailed to stringers with 8 inch wire nails. This alteration made the devil strip 3 feet 8 inches wide between the rails or two inches wider than the standard width. The wearing course of planks is in a poor condition, and is worn completely through in some places, but will serve without danger until the season of 1901.

LAKE SHORE ROAD CULVERTS.—One of these, near High Park was re-planked and the other one further west was repaired.

QUEEN STREET BRIDGE.—The old bridge has been removed and replaced by a new one of 125 feet clear span and built entirely of steel. The old position of the bridge was on a line, which was a compromise between the centres of Queen and King Streets. The new structure is exactly on the line of Queen Street. The roadway is 42 feet wide between curbs, leaving a driveway on both sides of 14 feet clear of the railway track, and there are two sidewalks of ten feet each in the clear. The deck and sidewalks are entirely covered with steel buckled plates, and surfaced with asphalt, with the exception of the space between the tracks, which is paved with square cut pine blocks, some treated with Carbolinium Avanarius and some with Finch's Wood Preservative, the remainder not being treated with any preservative. They are all set with paving pitch. Cast-iron pediments are erected at the end of each main truss, surmounted with ornamental electric lamp pillars and lamps. It was found necessary on account of the nature of the filling to support the end newel posts of the hand-railing on piles. This, however, is only a temporary arrangement and will be replaced with either stone or concrete when the ground is entirely settled. The abutments are built of rock-faced course masonry, set in Portland cement.

EASTERN AVENUE BRIDGE.—The old wooden bridge at this crossing has been removed and a new steel one substituted. The clear span over the river is 134 feet and the width between curbs 21½ feet; there are two sidewalks 7 feet wide in the clear; the deck and sidewalks are covered with pine planking, and the under planking and stringers have been treated with Carbolinium Avanarius. The abutments of this bridge are of concrete, with the exception of the bridge seat course and ballast wall, which are of rock faced course masonry, set in Portland cement.

HUMBER RIVER BRIDGE.—The old composite bridge on the Lake Shore road over this river was entirely removed and a new steel bridge erected on the same centre line. The clear span over the river is 160 feet, and the width between curbs 21½ feet; there is a sidewalk only on the south side of the bridge and it is 7 feet wide in the clear. The deck and sidewalk are covered with pine planking and the underplanking and stringers were treated with Carbolinium Avanarius. The abutments of this bridge are of concrete, with the exception of the bridge seat course and ballast wall, which are of rock faced course masonry set in Portland cement. In order to protect the filling for the roadway at each end, a sloping wall of piles was placed at each end at the south side of the bridge. These walls are tied to back logs buried in the earth filling.

JOHN STREET BRIDGE.—The deck planks of this bridge are showing a good deal of wear, but it has to be maintained by the Grand Trunk Railway.

KING STREET SUBWAY.—The Masonry of the abutment walls of this subway is being gradually destroyed for want of proper drainage.

YORK STREET BRIDGE.—The wood paving on this bridge is in a very poor condition and should be renewed, but before anything can be decided it must be known how it is intended to lay the Street Railway rails.

REPAIRS AND MAINTENANCE OF BRIDGES, 1900.

Location.	From 1899.	Nails, Etc.	Tools.	Paint and Sundries.	Lumber.	Labor.	Total.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Cherry St. Bridge..	186 76	47 30	......	126 50	791 61	356 13	1,508 30
Glen Rd. " ..	2,060 86	......	......	......	....	102 54	2,163 40
Lamb's draw " ..	64 38	14 15	7 33	60	8 69	56 66	151 81
Danforth Av. " ..	....	... .	....	......	126 82	130 61	257 43
Strachan Av. " ..	....	14 10	2 10	......	25 62	200 30	242 12
Castle Frank " ..	....	......	......	.....	31 82	60 84	92 66
Winchester St. " ..	....	44 23	......	17 79	461 89	311 08	834 99
Dupont St. Culvert..	....	......	......	......	13 46	8 66	22 12
Island Park Bridge..	. . ....	7 50	....	33 39	199 70	195 70	436 29
Dundas St. " ..	....	.....	......	3 00	....	3 00	6 00
Crawford St. " ..	....	25 40	......	2 50	325 97	143 33	497 20
Shaw St. " ..	....	62 30	6 98	3 65	1,060 81	578 93	1,712 67
Gerrard St. " ..	....	31 40	21 65	6 12	212 44	538 30	809 91
Lake Shore Rd. Culv't	....	. ....	.....	... ..	....	11 62	11 62
York St. Bridge..	....	......	......	14 35	....	54 94	69 29
Huntley St. " ..	....	.....	....	.....	....	6 13	6 13
Queen St. " ..	....	......	.....	16 06	....	....	16 06
Humber River " ..	....	......	......	1 12	....	....	1 12
	2,312 00	246 38	38 06	225 08	3,258 83	2,758 77	8,839 12

Respectfully submitted,

JOHN WILLIAMS,

Assistant Engineer.

REPORT OF STREET COMMISSIONER

CITY ENGINEER'S DEPT.,
Toronto, December 31st, 1900.

C. H. RUST, ESQ.,
City Engineer.

DEAR SIR,—I beg to submit herewith a report of the works carried out under my supervision during the year ending December 31st, 1900:

ROADWAYS.

It is gratifying to note that the movement on the part of property owners throughout the City to secure new roads on their respective streets, has become more and more widespread, as a comparison of the mileage of new roadways and pavements laid during the year now closing, with that of the past few years will show. It is noticeable also that pavements of a permanent character are given the preference. It must be allowed, however, that there yet remains room for a great deal of improvement in this direction, there being far too many worn out and unimproved roads for a City of the size and importance of Toronto.

Pursuant to an agreement made between the Corporation, and Lever Bros. we have constructed the following roadways in connection with their new works in the east end:

(1) From Eastern Avenue to the Cattle Byres. This was laid with cedar logs, on which was put a dressing of 4 inches of stone and 2 inches of gravel. Its length was 780 feet by 20 feet in width.

(2) Eastern Avenue, from the Don river to the G. T. Ry. crossing. This was macadamized. Its length was 1,338 feet by 30 feet in width.

(3) East side of the Don, from Queen Street to Eastern Avenue. This was also macadamized. Its length was 1,029 feet by 30 feet in width.

In connection with the above, we constructed 6-ft. wooden sidewalks on the south side of Eastern Avenue, from the Don bridge to the G. T. Ry. crossing, and on the east side of the Don, from Queen Street to Eastern Avenue.

VINE STREET EXTENSION.

In connection with this work a 2-in. x 8-in. curb was put in on both sides of the street, from Front to Mill Street. Sidewalks were also laid.

The new road was graded, and coated with a heavy coating of cinders. The total cost of these works was charged to the Wm. Davies Co.

QUEEN STREET.

The roadway on Queen Street between its junction with King Street and River Street, was widened. We removed the old blocks and made a temporary road of ashes, top dressed with gravel, well rolled, which will serve until the question of a permanent pavement is disposed of.

QUEEN STREET BRIDGE APPROACHES.

Following on the completion of the new bridge over the Don approaches were made on both sides, of cedar blocks.

KING STREET SUBWAY APPROACHES.

New approaches of cedar block have been constructed as follows:

On the north side of King Street, east of the subway, a distance of about 400 feet.

On the south side of King Street, west of the subway, a distance of about 600 feet.

I may mention that considerable repairs will be required next season to the opposite sides of those already repaired.

BATHURST STREET BRIDGE APPROACH.

The north approach to this bridge was repaved with granite setts over an area of 56 ft. x 66 ft.

FRONT AND ESPLANADE STREETS.

The funds specially appropriated by Council for the repair of these two roadways was expended to the best advantage, and their condition was materially improved.

In regard to the road on Esplanade Street, it is highly necessary that something of a permanent nature should be constructed to accommodate the exceptionally heavy traffic in that locality. I refer to that portion from Berkeley Street to York Street. The present macadam roadway was not properly constructed in the first place, and the drainage is poor, and the result is that all attempts to repair it have only a brief duration.

MACADAM ROADWAYS.

Repairs of a more or less extensive character have been made to the undermentioned streets :

John Street, from King to Front Street.
Teraulay Street, from Queen to Albert Street.
Albert Street, from James to Teraulay Street.
Beverley Street, from Queen to College Street.
Queen Street, from Greenwoods Avenue to Kingston Road.
Wellington Place, from Spadina Avenue to Portland Street.
Queen's Park Avenue, from College Street to Sir John A. Macdonald's Monument.

STONE ROADWAYS.

Funds were specially provided by Council for the relaying of the stone setts on Front Street, from Yonge to Bay Street, and east side of Yonge Street, from King to Colborne Street, between the street railway tracks and the curb. This has long been necessary, and the result is much appreciated by the merchants on those streets, and others.

GRAVEL ROADWAYS.

A special appropriation was also made for repairs to roads of this class, and the following have received attention :

Elm Grove, from Queen to King Street
O'Hara Avenue, from Queen Street to 1,475 feet north.
Brock Avenue, from Queen to Shirley Street.
Macdonell Avenue, from Queen Street to Pearson Avenue.
Melbourne Avenue, from Dufferin Street to Cowan Avenue.
Lansdowne Avenue, from Queen Street to 100 feet north of Marion Street.
Dovercourt Road from Queen to Foxley Street.

GENERAL REPAIRS.

These embrace repairs of a general character to the various classes of roadways (cedar block, macadam, etc.), grading unimproved roads, channelling, etc. Our aim has been to secure the best results possible, commensurate with the funds at our disposal.

HUMBER BRIDGE APPROACHES.

Considerable filling was required to the Humber Bridge approaches, in connection with the erection of the new superstructure. We experienced much difficulty in getting the necessary material for the purpose, until arrangements were made with the County authorities to obtain a supply from a hill on Jane Street. From this source we hauled 2,190 loads, on which was constructed the approaches of stone and cedar logs. Work on the west approach is not quite finished, pending the transference of a strip of property to the city, owned by Mr. Charles Nurse.

SIDEWALKS.

The remarks I have made in respect of the property owners bestirring themselves to secure new pavements, of late, are to some extent applicable to sidewalks. The mileage of plank sidewalks constructed has a tendency to diminish every year, due to the fact that permanent sidewalks are more and more in demand amongst property owners. Last year, I understand the permanent sidewalks laid totalled 5.77 miles, only, while this year the mileage was 15.265 miles.

The total mileage of wooden sidewalks constructed during the past year was 27.45 miles made up as follows :

4 feet wide	9.84 miles
5½ feet wide	5.42 miles
6 feet wide	12.10 miles
All other widths	.09 miles
	27.45 miles

Appended hereto is a list of wooden sidewalks constructed by us during the past year, as Local Improvements, which contains details of the material used, total cost, etc., of each one.

The sum of $2,252.50 was paid to the City Treasurer for short sections, and extensions of sidewalks laid. On Miscellaneous Account, the total amount paid over to the Treasurer was $830,01.

STREET OPENING PERMITS.

The number of permits issued to builders, excavators, and others to take up sidewalks temporarily, was 26 ; the usual deposit of $10 being exacted in each case as a guarantee that the sidewalk would be properly restored.

SNOW CLEANING FROM SIDEWALKS.

Pursuant to the provisions of the Snow Cleaning By-law, we cleaned during the winter of 1899-1900, about 440 miles (lineal) of sidewalks, at a cost of 3½ mills per foot frontage, each cleaning.

This cost is assessed against the properties cleaned, in proportion to the frontage, and the number of cleanings done.

STREET CLEANING.

The mileage of streets cleaned was 1,767½ miles. The sweepings and scrapings removed, totalled 37,163 loads. In this connection I may be permitted to observe that it would facilitate our work greatly, and the net result would be much enhanced, if owners and occupants of buildings could only be induced, or compelled to tie up in a secure manner all waste paper and litter when put out for removal by the scavengers. The bulk of the waste paper which constantly disfigures our streets, undoubtedly comes from the lanes where it has been deposited loosely.

Asphalt seems to be coming more and more into favor for pavements, and this means, of course, a constant expanding of the patrol or hand-cleaning system; that is, if the standard of excellence we have achieved in the past in respect of our street cleaning, is to be maintained. I need hardly point out that this cannot be done unless the necessary funds are appropriated. It is absurd to suppose that while the city is becoming better paved, and the citizens demand that the streets shall be kept clean, and free of dust, the appropriation for this branch of our work can remain at the old figure.

STREET CLEANING (SNOW).

For the first four months in each year, street cleaning is practically confined to removing snow and ice, where same accumulates beyond the point of safety to traffic, especially after a heavy storm. This applies more particularly to streets on which the street railway is operated; the accumulation having to be removed from the sides, and the transfer points at the intersecting streets.

On February 28th, and again on March 1st and 2nd, there were extraordinary snow-falls. Altogether we removed during the winter 45,203 loads of snow and ice, at a cost of $13,453.59, representing about 30 cents per load.

STREET CROSSINGS.

Repairs have been made, and new crossings put down at various points, as warranted by the funds at our disposal. The following is a list of the permanent crossings constructed :

Queen Street Avenue, on north line of Elm Street.
Bathurst Street, on north line of Wellington Avenue.
Front Street, on east line of Bathurst Street.
Queen's Park, w.s on line of St. Alban's Street.
Esplanade, on east line of Yonge Street.
Teraulay, Street, opposite west entrance of City Hall.
Front Street, on east line of Simcoe Street.
Albert Street, on east line of Terauley Street.
Teraulay Street, on south line of Albert Street.
Cecil Street, on west line of Beverley Street.
Cecil Street, on west line of Phoebe Street.
Cecil Street, on west line of St. Patrick's Street.
Lombard Street, on west line of Jarvis Street.
Adelaide Steet, on west line of Jarvis Street.

CURBING.

Repairs of a more or less extensive character have been made to the stone, and wood curbing throughout the city. A great number of sections of wood curbing have been constructed under the Local Improvement system.

HOUSE OF INDUSTRY STONE.

Stone for macadam purposes, amounting to about 107 toise, was broken for this department by the occupants of the above named Institution.

STREET FLUSHING.

Consequent upon the numerous complaints from merchants and others, of damage and inconvenience caused by the dust on the main business streets, the system of flushing the asphalt pavements on Queen, Yonge, and King Streets was tried early on in the season ; the flushing being confined to three nights per week. Later on this was discontinued by order of the Committee on Works, and the balance of the funds, specially appropriated by Council for the purpose, was transferred to " Street Watering " account. Since that time the streets have been lightly sprinkled by the watering waggons, from the tracks to the curb. While dealing with this subject I may perhaps be permitted to say that, in my opinion, the flushing system, if combined with the patrol system, as operated during the day, is the best one so far evolved, for overcoming the dust nuisance. of which so much has been heard of late years from occupants, and the general public on the asphalted streets in the business section of the city. In my judgment, the flushing should be done nightly, with the exception of Sunday nights, during the summer months beginning with May, and the system should embrace as wide an area of streets asphalt paved as possible ; the object being to prevent the dust and dirt of one street contaminating another. At the best, this trouble can only be partly obviated, in view of the large number of lanes and macadamized streets connecting with those that are paved with asphalt, whereby mud is tracked upon the latter. The great drawback to the sprinkling system is the danger of accidents to vehicular traffic, and bicyclists, by reason of the slippery, or greasy condition it imparts to the asphalt. The department is regularly inundated with complaints in this connection.

STREET WATERING.

The past year makes the seventh during which the system of watering the track allowance has been in operation. We have three tanks in commission, and the aggregate mileage covered by the three was 20,324 miles. The total cost was $3,302 66, representing a rate of 16¼ cents per mile. The water used in this service amounted to 31,285,000 gallons.

The ordinary watering waggons used 55,619,000 gallons, representing 123,926 loads, making a grand total of 86,904,000 gallons of water used in the Street Watering service.

SCAVENGING.

The loads collected by the scavengers for the year ending December 31st, totalled 136,332, of which 35,932 were garbage, and the remainder (100,400) were ashes.

ISLAND SCAVENGING.

The usual semi-weekly service was operated from May 17th until September 29th.

ELLIOTT AND NEELON PLANT.

Pursuant to order of Council, the Elliott & Neelon plant, stored in the city lot on the north side of King Street, west of the City Yard, was moved to the city lot on the east side of Dufferin Street, south of King Street, at a cost of $484.01. There were some 480 loads altogether, of which 246 were stone, 114 timbers, and 120 were boxes, poles, etc.

ACCIDENTS TO EMPLOYEES.

Seventeen men received injuries while on duty, sufficient to incapacitate them for work. Pursuant to an Order of Council respecting accidents to civic employees, these men were paid while off duty; the total sick pay amounting to $604.69. The period of disablement ranged from 27 to 432 hours.

Yours faithfully,
JOHN JONES,
Street Commissioner.

LIST OF WOOD SIDEWALKS CONSTRUCTED BY STREET COMMISSIONER'S DEPARTMENT DURING 1900.

DISTRICT No. 1.

Street.	Side.	From	To	Width (feet.)	Length (feet.)	Lumber (feet B. M.)	Nails (lbs.)	Total Cost. $	c.
*Austin ...	S ..	Pape	Pt. 615 ft. e.........	4	615	6,576	175	291	92
			Curbing and spikes..	....	....	2,052	50		
Bain	N..	Carlaw	Pape	4	585	6,256	200	142	91
Brooklyn .	E..	Queen	Dagmar	6	1,392½	22,176	600	542	27
" .	W..	"	"	6	1,394½	22,176	600	529	55
Broadview.	E..	"	Eastern	5⅓	927	13,612	350	356	10
† " .	E..	Allen	Simpson	6	1,032	16,416	400	324	24
Curzon ...	W..	Queen	Doel	4	1,275	13,616	400	319	71
Eastern ...	N..	Broadview	Strange	4	756	10,293	250	365	60
Hamilton .	E..	Elliott	Gerrard	4	1,127	12,037	300	268	71
Laing	W..	Queen	Eastern	4	593	6,338	200	132	16
"	E..	"	230 ft. s. of Eastern..	4	816	9,051	275	233	58
Napier	B..	Munro	West end...........	4	652	6,970	200	152	79
‡Natalie...	N..	Logan	Booth	6	238	3,968	100	168	40
			Curbing and spikes..	....	....	800	50		
Pape......	W..	G. T. R	Frizzell	6	1,950	32,326	800	652	11
Queen	N..	Pape	Curzon	6	1,468	23,970	700	539	01
"	N..	Curzon	Kingston Rd	6	5,166	84,944	1,900	1,807	56
			Inch boards, and 3	inch	nails ..	192	50		
§ "	S ..	Don Bridge ..	Smith's Blk	6	286	4,576	100	87	72
River	W..	Queen	Gerrard	6	2,162	37,236	1,000	801	90
			Spikes	......	....	....	50		
Steiner ...	B..	Matilda	North end..........	4	858	9,168	300	208	44
Sumach ...	W..	Spruce	Carlton	6	408	6,544	200	179	57
" ...	E..	King..........	Queen	6	418	6,704	200	174	94
" ...	W..	"	"	6	428	6,864	200	195	70
‖ " ...	W..	Winchester....	Wellesley	5⅓	802	11,438	350	289	88
Taylor	N..	192ft.w.ofRiver	Pt. 73 ft. w.........	4	73	794	25	17	62
"	N..	Sumach	195 ft. e	4	195	2,096	50	52	07

*Forty-three cedar posts.

†Not laid from Gerrard St. north, 72 feet, in front of Nos. 363-67-69-71.

‡Half-cord of cedar posts.

§Laid from Smith's Block to 286 feet west.

‖Not laid at lane north of No. 428, 12½ feet; nor at lane north of No. 438, 12½ feet.

DISTRICT No. 2.

Street.	Side.	From	To	Width (feet.)	Length (feet.)	Lumber (feet B. M.)	Nails (lbs.)	Total Cost.
								$ c
*Amelia	S	Parliament	Metcalfe	6	331	5,120	125	135 53
Arnold	W.	St. Davids	Wilton	4	422	4,630	140	109 81
†Berkeley	E	90 ft. s. of Queen	Duke	6	716	11,816	300	469 47
			Curbing and spikes			2,380	75	
Berkeley	W.	King	Front	6	282	4,694	140	93 31
‡ "	W.	Duke	Duchess	6	440	7,214	215	323 29
			Curbing and spikes			1,504	35	
§Duke	S	Ontario	Princess	5½	208	3,184	105	117 02
			Curbing and spikes			697	15	
Front	S	Princess	Tor. Ry. Power House	6	364	5,985	190	132 66
‖George	W.	Queen	Duke	6	385	6,314	160	133 75
¶Metcalfe	B	Winchester	Amelia	6	992	15,521	440	319 00
			Spikes				25	
Oak	N	Parliament	Sackville	5½	791	11,912	385	273 20
Queen	S	Power	Pt. 246 ft. e	6	275	4,562	110	88 88
**Sackville	E	Salisbury	North end	6	825	13,369	400	294 12
			Spikes				35	
††Seaton (curb).	W.	Queen	Wilton		1,390	4,474	50	236 07
			Spikes				100	
Sherbourne	E	King	Front	6	277	4,689	150	95 88
‡‡Suffolk Pl	B	Homewood	West end	4	642	7,152	200	342 60
			Curbing and spikes			2,015	105	
Trinity	E	Front	Mill	6	472	7,612	205	151 57
Wilton	N	Parliament	Berkeley	6	325	5,272	155	104 03
Wellesley	S	Ontario	Pt. 299 ft. w	6	308	4,928	150	104 14

*Not laid at lane, 11 feet.

†Seventy-five cedar posts.

‡Twenty-eight cedar posts.

§Thirteen cedar posts.

‖Laid only from Queen to Duchess St.

¶Not laid at lane on east side, south of No. 67, 17 feet; nor opposite No. 51, 17 feet.

**Not laid at lane north of No. 485, 14 feet. Laid only from Salisbury Avenue, northward, 739 feet.

††Eighty-four posts. Not laid in front of Nos. 128 and 130, 55 feet.

‡‡Sixty-two posts.

DISTRICT NO. 3.

Street.	Side.	From	To	Width (feet.)	Length (feet.)	Lumber (feet B.M.)	Nails (lbs.)	Total Cost. $	c
Armory ..	N..	Chestnut	Centre	4	250	2,667	75	53	17
Baxter	S ..	Yonge	East end	4	143	3,349	150	29	30
Bellefair ..	E ..	Bloor	Yorkville	5½	716	8,082	250	152	22
Berti	E ..	Richmond	115 ft. n...........	4	115	1,227	40	26	59
Birch	N..	Yonge	West end...........	5½	1,333	19,531	510	520	47
* Buchanan	B ..	"	Teraulay	6	1,358	21,720	550	458	68
Chapel	W .	St. Joseph.....	St. Mary...........	5½	578	8,478	250	171	10
†Cherokee.	C ..	Lake Shore....	418 ft. n...........	6	418	7,024	175	153	44
Chicora ...	S ..	Avenue Road..	225 ft. w...........	6	230	2,680	100	90	75
Collier	N..	Yonge	629 ft. e	4	629	6,710	175	126	98
"	S ..	"	652 ft. e	5½	652	9,563	250	255	10
Cottingh'm	N..	Gange.........	101 ft. e	6	101	1,616	50	30	83
‡Czar	S ..	16 ft. w. Yonge	North	6	622	9,952	250	198	12
Chestnut ..	E ..	Hayter	Chestnut Place......	6	373	5,968	200	114	78
Dalhousie .	E ..	141 ft. n. Queen	Shuter	4	425	4,534	125	87	40
§Edward ..	S ..	University	Centre	5½	199	2,919	80	94	31
			Curbing	and	spikes	664	7		
‖Grenville .	S ..	Yonge	Elizabeth...........	6	1,118	17,888	425	336	77
Hagerman.	S ..	Elizabeth	East end	6	173	2,768	75	52	03
Hayter....	N..	Yonge	Chestnut	6	1,200	19,200	550	378	74
Hazleton ..	E ..	Yorkville......	Davenport..........	5½	1,581	23,188	700	452	58
Irwin	S ..	Yonge	St. Nicholas........	6	201	3,216	100	101	02
			Curbing	and	spikes	627	10		
¶ "	N..	St. Nicholas...	Chapel	4	417	4,448	132	221	76
			Curbing	and	spikes	1,780	25		
** "	N..	Yonge	St. Nicholas........	6	201	3,216	85	111	03
			Curbing	and	spikes	813	14		
††L. Shore Rd. (island)	N..	Manitou	25 ft. e. of Hooper ..	6	1,366	22,256	550	450	83
M'cpherson	N..	Yonge	Avenue Road	6	1,968	31,488	775	917	58
Marlbor'gh	S ..	"	1345 ft. w...........	6	1,345	21,520	500	590	29
‡‡Park Rd.	W .	Collier	360 ft. n...........	4	360	4,440	130	110	48
Pearl.....	S ..	Simcoe	247 ft. e...........	8	247	5,482	133	98	07
Phipps ...	S ..	St. Vincent....	St. Nicholas	4	422	4,502	150	86	29
Scollard ..	N..	295 ft. w. of 1st lane w. of Yonge	Hazleton	5½	1,018	14,931	400	367	69
" ..	N..	1st l'n w. Yonge	Pt. 295 ft. w........	5½	295	4,327	110	107	89
Shaftesbu'y	N..	Yonge	125 ft. e	10	125	3,334	75	60	08
Summerhill	S ..	Ottawa........	83 ft. e	6	459	1,488	35	28	52
Teraulay ..	E ..	Hayter........	Buchanan	6	230	3,680	100	69	52
" ..	E ..	Gerrard	121 ft. n...........	6	121	1,936	50	37	96
§§Walton..	N..	Yonge	Elizabeth	6	1,042	16,672	400	326	38
‖‖Yonge ..	E ..	Price..........	Shaftesbury	6	680	11,432	250	222	30
¶¶ Yorkv'e	S ..	Yonge	Avenue Road.......	6	1,913	30,608	750	633	14

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* Not laid in front of No. 53-61 (Thompson's), 33 feet, nor in front of No. 23, 9½ feet, nor opposite lane between Nos. 6 and 8, 16 ft., nor opposite lane between Nos. 5 and 7, 15½ ft.

† Sixteen cedar posts.

‡ Not laid 7 feet at No. 1.

§ Thirteen cedar posts.

‖ Not laid in front of No. 67, 13 feet.

¶ Twenty-three posts.

** Twelve posts.

†† Laid from Manitou to 25 ft. e. of the west limit of Hooper St.

‡‡ Twenty-three posts.

§§ Except 16 feet opposite Nos. 32 and 34.

‖‖ Not laid in front of E. Rogers & Co.'s property, 72 feet, nor at Can. Pac. Ry., 20 feet.

¶¶ Not laid at lane between Nos. 9 and 11, 12 ft. 8 in., nor at lane between Nos. 33 and 37, 10 ft. 8 in., nor at lane between Nos. 63 and 65, 12 ft. 8 in.

DISTRICT No. 4.

Street.	Side.	From	To	Width (feet.)	Length (feet.)	Lumber (feet B. M.)	Nails (lbs.)	Total Cost.
								$ c
Balsam	N	Charlotte	Spadina	4	314	3,349	150	81 39
Bro'dw'y Pl	N	Spadina	West end	4	534	5,696	200	130 04
Casimir	W	St. Patrick	North end	4	210	2,240	100	51 81
*Denison	W	Queen	St. Patrick	6	1,439	21,576	600	779 72
			Curbing and spikes			4,792	200	
Duncan	B	Adelaide	Richmond	4	774	8,256	250	185 55
Eden Pl	S	Bathurst	East end	4	331	3,531	150	81 58
†Eden Pl. (curb).	S	"	"		336	1,120	50	200 62
			Spikes				50	
Harbord	S	St. George	Spadina	6	935	13,348	350	288 92
Howland	B	Barton	Wells	6	1,517	24,272	700	496 56
‡Hickory	W	St. Patrick	North end	4	194	2,328	100	58 18
Kensington	E	Baldwin	St. Andrews	4	230	2,432	100	52 80
Leonard	B	Nassau	Bellevue	6	1,392	22,334	600	536 37
§Lennox	B	Lippincott	Borden	4	664	7,083	300	289 15
			Curbing and spikes			2,013	24	
‖Morrison	W	Adelaide	207 ft. s	4	210	2,240	100	99 49
			Curbing and spikes			700	25	
Nelson	N	Duncan	Simcoe	6	528	8,448	200	182 00
¶Niagara	N	Portland	Bathurst	5½	671	9,841	300	378 14
			Curbing and spikes			2,177	75	
Oxford	N	Bellevue	Lippincott	6	517	8,272	200	213 41
Robert	E	College	Willcocks	6	1,138	16,608	500	
Sh'p'rdsLa.	N	Bathurst	Markham	4	286	3,050	100	68 23
Sussex	N	Borden	Brunswick	6	284	4,544	150	104 92
"	S	"	"	6	284	4,544	150	98 90
St. Patri'k's Square.	W	Queen	121 ft. n	6	121	1,936	100	42 12

*Seventy posts. Not laid in front of Lawrence Bros.' property, 88½ feet; nor opposite the flankage of No. 486 Queen St., 17 feet.

†Nineteen posts.

‡Ten posts.

§Thirty-four posts.

‖Nine posts.

¶Twenty-eight posts.

District No. 5.

Street.	Side.	From	To	Width (feet.)	Length (feet.)	Lumber (feet B.M.)	Nails (lbs.)	Total Cost	
								$	c
Argyle	S	Dundas	Shaw	5⅓	586	8,403	300	218	85
Bruce	S	192 ft. e. Givens	“	3	92	797	40	18	84
Bruce	N	Dundas	“	4	598	6,379	250	147	58
Bruce	S	Givens	192 ft. e	4	192	2,048	75	47	24
Clinton	W	Bloor	322 ft. n	4	322	2,435	100	76	93
“	E	Bloor	324 ft. n	4	324	3,456	125	76	54
*Concord	E	Dewson	College	5⅓	941	13,801	475	455	72
			Curbing	and	spikes	3,137	100		
Churchill	N	Dovercourt	715 ft. e	6	715	11,440	350	364	03
Claremont	E	Queen	Arthur	5⅓	1,817	27,833	900	604	46
“	W	“	“	5⅓	1,805	27,658	900	597	90
College	S	Palmerston	Clinton	6	934	14,944	475	315	38
Dewson	N	Dovercourt	Ossington	4	926	9,877	350	220	35
Dovercourt	W	College	Dewson	6	940	15,040	475	323	07
“	W	50 ft. n. Dewson	Bloor	5⅓	1,760	25,813	850	550	69
Dundas	N	Ossington	Dovercourt	6	991	15,856	550	355	20
Dupont	N	Bathurst	Palmerston	5⅓	630	9,249	300	234	51
Dovercourt	E	Northumberl'd.	Shanly	4	764	8,149	300	182	26
Dundas	S	14 ft. w. of Bend	Dovercourt Road	6	950	15,200	475	317	51
Euclid	W	Robinson	Arthur	5⅓	1,274	18,685	650	603	07
Folis	N	Bathurst	Palmerston	4	618	6,592	225	144	37
†Harbord	S	Manning	Clinton	6	296	4,736	150	148	44
			Curbing	and	spikes	1,134	25		
Henderson	N	Manning	Grace	4	732	7,808	275	140	60
Lennox	N	Bathurst	Manning	6	1,258	20,194	600	405	58
Mansfield	S	Manning	Claremont	6	146	2,336	75	51	33
Melville	N	Christie	West end	4	690	7,360	225	162	79
“	S	“	“	4	690	7,360	225	163	12
Manning	W	Henderson	200 ft. n. of Arthur	6	915	15,188	450	295	41
Niagara	S	Tecumseth	Bathurst	6	662	10,592	300	356	38
Olive	S	Bathurst	Palmerston	4	616	6,571	225	151	33
Palmerston	W	College	Arthur	6	1,533	24,519	750	751	10
Rebecca	S	Givens	Dundas	4	324	3,456	125	77	12
Robinson	N	Euclid	Bellwoods	5⅓	782	11,469	400	251	42
Rebecca	N	Givens	Dundas	4	324	3,456	125	77	60
Robinson	S	Palmerston	Manning	6	574	9,184	300	202	34
Strachan	W	King	Queen	6	1,156	18,496	600	395	46
Sully Cr.	S	Sully	Shaw	4	596	6,357	225	141	90
“	N	“	“	4	595	6,346	225	144	72
Tecumseth	W	Niagara	Wellington	6	214	3,424	100	74	33
Turner	S	Tecumseth	West terminus	4	420	4,480	150	98	60
‡ Welling'n	N	Bathurst	Tecumseth	5⅓	661	9,694	300	403	37
			Curbing	and	spikes	2,200	50		
Yarmouth	S	Christie	West end	4	680	7,253	225	159	73

* 122 cedar posts.

† 48 cedar posts.

‡ 100 cedar posts.

DISTRICT No. 6.

Street.	Side.	From	To	Width (feet.)	Length (feet.)	Lumber (feet B.M.)	Nails (lbs.)	Total Cost.
								$ c
Argyle	S	Dovercourt	Northcote	6	887	14,192	500	362 15
Bartlett	W	Hallam	Van Horne	4	927	9,916	350	218 50
Brock	W	Dundas	N. Rly track	6	1,681	27,003	750	592 45
*Bloor	S	"	Landsdowne	4	2,530	26,987	900	577 11
Collahie	B	Gladstone	Beaconsfield	6	774	12,324	400	271 90
College	N	Lansdowne	St. Clarens	5⅓	314	4,625	150	103 33
† "	S	"	Rusholme	5⅓	3,012	44,523	1,300	952 46
‡ Dundas	N	"	Dufferin	6	1,909	30,904	950	647 17
§ Dufferin	E	Bloor	North end	4	3,411	36,605	1,100	835 42
‖ Dufferin	W	135 ft. n. Muir.	Pt. 1,341 ft. n.	4	476	4,991	150	104 19
Dundas	S	Dovercourt	Gladstone	6	1,278	20,448	600	434 46
"	N	Coolmine	Rusholme	6	240	3,883	100	70 22
Fuller	W	Pearson	Marion	5⅓	315	4,686	150	127 83
Garden	S	Sorauren	Pt. 633 ft. w	5⅓	658	9,735	300	267 03
Garden	N	"	"	5⅓	658	9,735	300	273 84
¶ Havelock	W	Bloor	763 ft. south	6	775	12,448	400	430 16
			Curbing	....	....	2,543		
Hallam	N	Dufferin	Dovercourt	4	1,530	16,446	600	370 33
Jameson	W	King	Leopold	5⅓	555	8,347	230	172 56
Landsdo'ne	E	192 ft. n. Coll'ge	Pt. 533 ft- further n.	4	533	5,694	200	113 14
"	E	Bloor	114 s. of Wallace	4	1,344	14,382	500	309 33
M'kenzie cr	B	Dovercourt	Beaconsfield	4	2,012	21,536	700	504 40
Maud	N	Perth	Pt. 235 ft. w	4	237	2,536	100	54 59
Mechanics	B	Delaney	Wyndham	4	858	9,164	250	185 50
Middleton	S	Brock	Sheridan	4	451	5,072	200	110 17
Northcote	W	Queen	Argyle	6	969	15,736	500	462 69
N. Lisgar	E	Dundas	375 ft. south	5⅓	383	5,641	150	131 22
Preston	E	Pt. 100 ft. n. of Bloor	Hallam	4	2,152	22,954	725	496 08
Russett	E	Bloor	North terminus	4	996	10,664	350	232 54
Rusholme	E	Dundas	St. Ann	5⅓	633	9,314	300	201 80
Salem	W	Hallam	Van Horne	4	927	9,916	350	218 41
Salem	B	Bloor	Shanly	4	2,248	24,342	800	527 02
†† Sheridan	E	Florence	Bank	5⅓	642	9,468	300	316 15
			Curbing	and	spikes	2,140	50	
Sunnyside	E	Queen	Pt. 473 ft. n	4	473	5,097	150	130 22
Wallace	B	Dufferin	107 ft. e. of Emerson	4	2,564	27,429	900	593 34
Westmorl'd	E	Bloor	Shanly	4	1,076	11,588	400	251 28
"	W	Van Horne	"	4	1,980	21,746	700	490 65
W. Marion	B	Roncesvalles	East terminus	5⅓	1,464	21,502	600	451 36

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* Except 133 ft. in front of J. Lochrie's property.

† Fifty cedar posts. (Not laid in front of store on south-west corner of College and Dufferin St., 10 feet.)

‡ Except 107 ft. from Sheridan Ave. east; also in front of No. 604, 27 ft.; also in front of No. 598, 14 ft.

§ Not laid in front of property at south-east corner of Dufferin and Shanly, 18 ft.

‖ Laid only from 1009 ft. north of Muir to 476 ft. further north.

¶ Fifty-two posts.

†† 87 cedar posts.

WATER WORKS.

REPORT FOR THE YEAR ENDING DECEMBER 31st, 1900.

CITY ENGINEER'S OFFICE,
Toronto, December 31st, 1900.

FINANCIAL.

The total expenditure for the year of the portion of the Water Works Department which is under the control of the City Engineer, amounted to $167,922.45, divided as follows:

Maintenance	$145,072 86
Construction	13,829 07
Renewals	6,501 92
Special Work	2,518 60

The expenditure of the Revenue and Collection Branch under the control of the City Treasurer, amounted to $24,751.25.

The revenue reported by the City Treasurer (which includes water supplied for Corporation purposes, $55,398.46)	$330,432 46
Interest and sinking fund on debenture debt	222,749 00

DISTRIBUTION.

The total length of mains of all sizes laid during the year is 5,527¼ feet, divided as follows:

212 feet of 16-inch steel pipe.
113 " 16 " C. I. "
4,678¼ " 6 " " "
523¾ " 4 " " "

In addition, 670 feet of 2-inch wrought iron service main has been laid, and 325 feet of old cast-iron pipe taken up, making a total in use at the end of the year of 258.564 miles of water mains. For details as to number of valves and hydrants, I beg to refer to the report of the Deputy City Engineer.

SERVICES.

680 services were put in during the year, of which 6 are on the Island.

LEAKS IN MAINS.

173 leaks have been repaired this year, the average cost per leak being $4.90.

I again beg to call the attention of the Council to the urgent necessity of procuring increased pumping plant at both the Main Pumping Station and High Level Pumping Station. In my report of last year, I referred to the saving that could be effected by so doing, and I will not therefore enlarge upon the subject. There are also several new mains required, which have been reported upon on more than one occasion during the year, but up to the present the Council has not been able to provide sufficient funds to carry out these very necessary works.

WASTE PREVENTION.

The Council granted during the year a small appropriation for this purpose, and I would refer you to the report of the Deputy City Engineer as to the results obtained.

TEMPERATURE.

The average temperature of the water supplied during the year was 45.6 deg. Fah., the highest occurring on August 24th, when it was 67 deg. Fah., the lowest being 35 deg. The highest monthly average was 56.3 deg. Fah. for 1900.

Respectfully submitted,
C. H. RUST,
City Engineer and Manager of Water Works.

Report of Assistant Engineer in Charge of Water Works Construction, Distribution, and Maintenance.

CITY ENGINEER'S DEPT.,
Toronto, December 31st, 1900.

C. H. RUST, ESQ.,
City Engineer, Toronto:

DEAR SIR,—Herewith is submitted a report of the work done by this branch of the Department during the year ending the 31st December, 1900.

DISTRIBUTION.

The total length of cast iron mains of all sizes laid this year is 5,315 feet, consisting of :

113	feet of	16-inch	C.I.	pipe.
4,678¼	"	6	"	"
523¾	"	4	"	"

In addition 670 feet of 2-inch wrought iron service main was laid. 212 feet of 16-inch steel pipe was laid across the River Don at the new Queen Street Bridge, and the old 12-inch rivetted iron pipe crossing the Don at Eastern Avenue Bridge was replaced by a new 12-inch lap welded steel pipe. 325 feet of old 6-inch pipe at the Don Bridge on Queen Street was abandoned, leaving a total in use at the end of the year of 1,365,225¼ feet, or 258.564 miles of water mains.

STOP AND CHECK VALVES.

The number of stop valves placed in position this year is as follows :

3	12-inch	stop	valves.
17	6-inch	"	"
3	4-inch	"	"

One 8 inch stop valve and 2 6-inch stop valves have been removed, leaving a total of 2,334 stop valves of all sizes in use, and 66 check valves.

HYDRANTS.

9 additional 2-way hydrants have been placed on the streets and one has been taken out, the total number now in use being 3,066. Four 2-way hydrants have been replaced by 3-way, and two 2-way hydrants have been replaced by 4-way hydrants.

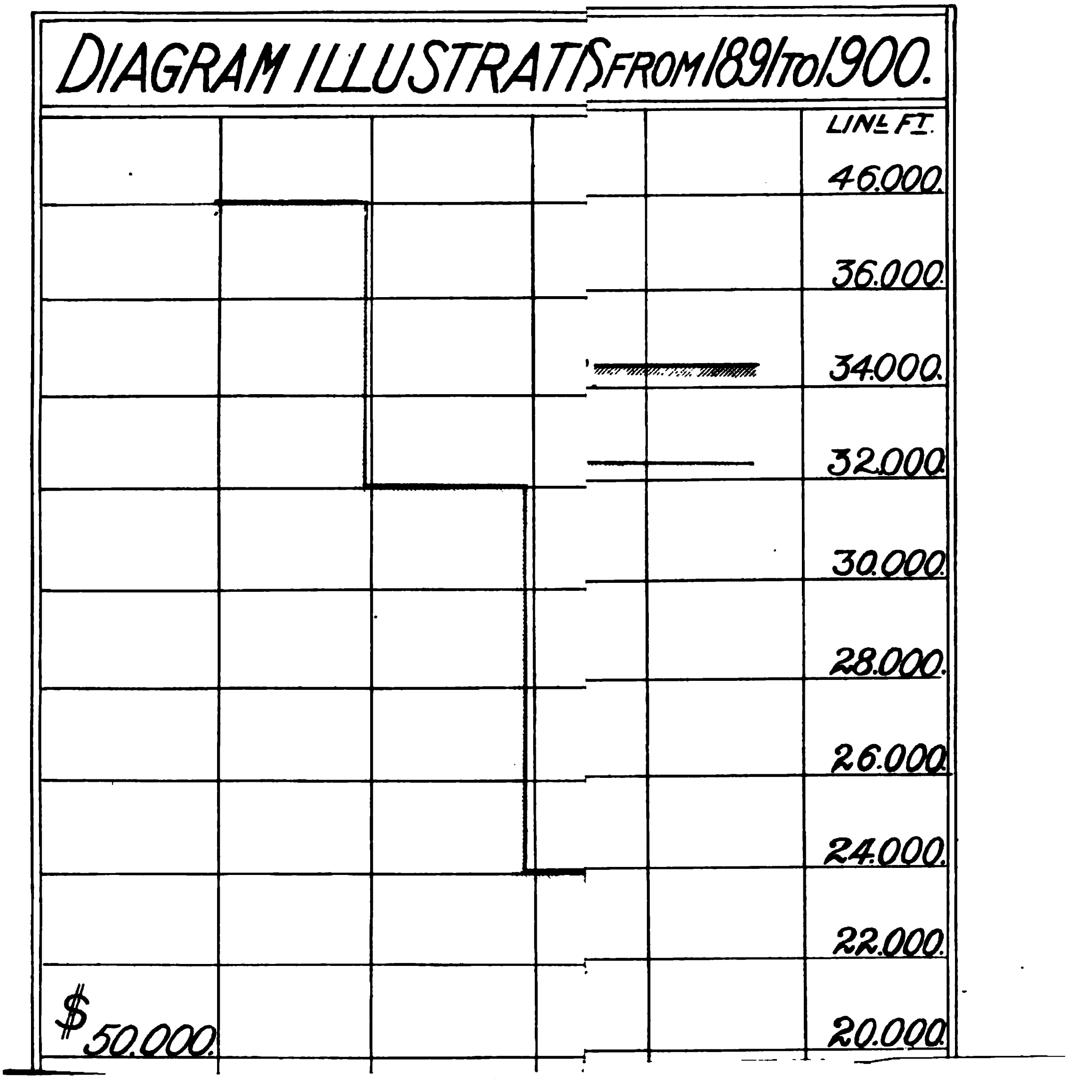
DIAGRAM ILLUSTRATI
S FROM 1891 TO 1900.
LIN^L FT.
46.000.
36.000.
34.000.
32.000.
30.000.
28.000.
26.000.
24.000.
22.000.
20.000.
$ 50.000.

SERVICES.

680 services have been put in this year, of which 6 are on the Island.

LEAKS IN MAINS.

178 leaks in mains have been repaired at a cost of $848.71, exclusive of asphalt repairs, the average cost per leak being $4.90.

They were as follows :

6	in	36-inch	Main.
5	"	24 "	"
1	"	20 "	"
86	"	12 "	"
3	"	8 "	"
69	"	6 "	"
3	"	4 "	"

METER AND MACHINE SHOPS.

The running repairs for pumps and engines at both High Level and Main Pumping Stations have been made, together with machine work for repairs of hydrants, screws, jackets, and spindles, and for the City Hall Engine Room and Sewer Department.

Some 34 hydrants have been erected on the Island for fire protection, the whole of the work and material being executed by this Department. The Department's work in placing and repairing meters has been very much restricted, owing to the supply of spare meters being exhausted.

400 meters were taken off and replaced by new meters.

68 new meters were placed on services.

97 new meter boxes put in and 38 new frames.

564 meters were repaired without removal.

8 combination drinking fountains were constructed and erected.

The cups, cocks and fittings for all fountains were overhauled and painted.

HYDRANT AND VALVE DEPARTMENT.

The following work has been performed by this Department during the year :

HYDRANTS.

New valves	108
New jointing rings	123
Hydrants replaced with separate hydrants	38
Hydrants replaced with 3-way hydrants	2

New chain rings	54
Hydrant screws replaced with standard screws	148
“ packing nuts replaced with standard nuts	115
“ caps replaced with standard caps	201
Hydrants packed and oiled	2,855
“ frozen, blown out, pumped, packed and oiled	728
“ frozen, fired ont, “ “ “ “	113
“ pumped, packed and oiled	1,450
Hydrant inspections	43,975
Hydrants cleaned, repaired, tested and painted	69
Hydrants jacketed and tested, complete	25
Cap leather	153
Chain rings repaired	211
Hydrants set with bar and chain	41
Nozzles Caulked	169
Jackets lowered	169
Jackets cut and replaced with short top	58
4-way hydrants, detail work gone over, jacketed and tested	9
Hydrants taken out and waste opened	28
Hydrant waste hole opened with bar and chain	44
Standard die put over 3-way nozzle of 3-way hydrants on street	92
Mains blown out	133

VALVES REPAIRED.

12-inch	2	6-inch	23	4-inch	1	3-inch	3

VALVES TESTED.

12-inch	1	9-inch	1	8-inch	13	6-inch	5
4-inch	13	2¼-inch	2	2-inch	6		

BRASS WORK TESTED.

Double Cocks :

1x¾x¾-inch	¾x⅝x⅝-inch	⅜x½x½-inch
31	85	365

SINGLE COCKS.

1-inch	¾-inch	⅝-inch	½-inch	⅜-inch
217	193	258	1658	243

COUPLINGS.

1-inch	¾-inch	⅝-inch	½-inch	⅜-inch
108	153	322	1612	525

S. NIPPLES.

1-inch	¾-inch	⅝-inch	½-inch
212	56	204	258

D. NIPPLES.

¾-inch	⅝-inch	½-inch
233	205	834

RESERVOIR.

The reservoir received its annual cleaning, that is in so far as it is possible to clean it under its existing condition. About two-thirds of the bottom has been concreted, but the remaining one-third as well as the inner slopes are in their old condition, which consists of a lining of about 18 inches of broken stone between the interstices of which is deposited all silt, slime and decayed vegetable matter, which it is impossible to remove.

The grounds have been kept in good condition. There is, however, room for permanent improvements to portions of the property, which so far it has been impossible to go on with for lack of funds.

STABLES.

The horses and drivers have been kept fully employed during the year, the cost being $3,528.75.

STORE HOUSE.

The stock and balances on hand have been checked over and found correct.

The blacksmith shop and wagon shed should be replaced by a brick building, the upper story of which could be used as a pattern shop and loft. The present wooden buildings are in a very dilapidated and unsatisfactory condition. They have been on fire two or three times, having caught from bonfires made by boys in the lanes in the rear. By the erection of a brick building this danger would be avoided.

HIGH LEVEL STATION.

The total quantity of water re-pumped for the year at this station was 1,291,747,080 gallons, and the coal consumed while pumping 1212.1425 tons. The daily average consumption being 3,539,033 gallons. The average pressure on the district was 54.54 pounds per square inch. The pumps are started at 6 o'clock a.m. and stopped at 10 o'clock each evening, giving 16 hours daily run, the rate they are pumping water being 5,308,549 gallons per twenty-four hours. The capacity of the engines is 3,000,000 gallons each or 6,000,000 for both per twenty-four hours at their contract speed, viz., 50 revolutions per minute. It will be observed that they are, under ordinary working conditions, approaching their contract limit.

I regret to have to report that Mr. Wm. Hall, Chief Engineer of this Station, met with an accident on the eve of December 31, 1900, which resulted in his death.

ISLAND PUMPING STATION.

The pump at this station was started on the 1st day of May, and the plant closed down for the winter on the 15th of October. There was one leak on the mains, a honeycombed 4-inch pipe and two or three on the services, the pressure maintained during day and night being 30 to 40 pounds. Some 34 2-inch hydrants were erected for fire protection, the Fire Department providing the necessary hose and reels as well as alarm bells. The volunteer brigade handle the reels in case of fire.

MAIN PUMPING STATION.

The expenditure charged to this station for the year was $80,339.85, the water pumped being 8.064 millions of imperial gallons, 7,412,521,197 gallons being pumped by the Blake High Duty Engines, and 651,863,386 gallons were pumped by Nos. 1, 2 and 3 Low Duty Engines. This year Nos. 4 and 5 pumped 21,900,404 gallons more than last year, and the low duty engine 41 per cent. more than last year, which is due chiefly to the increased consumption and the fact that Nos. 4 and 5 are pumping their maximum while running. For fully one-half the year No. 1 Worthington has been running in conjunction with 4 and 5 to enable the supply and pressure to be kept up. A very large economy might be effected by the purchase of a 15,000,000 gallon triple expansion high duty pumping engine.

The saving in pumping the year's supply over the best work of Nos. 4 and 5, and No. 1 (all three burning soft coal screenings) would be $15,000.00 per annum, together with the advantage of having an up-to-date reliable plant capable of meeting any demands made upon it.

TEMPERATURE.

The average temperature taken at the City Hall tap of the water supply during the year was 45.6 degrees fah., the highest occurring on the 24th of August, when it was 67 degrees, the lowest being 35 degrees on the 2nd of March.

The highest monthly average was 56.3 degrees, during the month of August. Additional information will be found in schedule relating to same.

WASTE PREVENTION.

The Council this year granted a small appropriation for this purpose. The district selected was the north-western section of the City, extending from Dundas Street on the west to Manning Avenue on the east, and from College Street on the south to City limits on the north, containing 1,356 acres, the number of houses being 2,090, the tubs 3,008, lawn hydrants 472, baths 864, closets 932, the population 8,553. The consumption averaged 234,163 gallons per day of 24 hours, before repairs were made ; the leaks on mains were 58, showing a loss of 26,122 gallons per 24 hours, and the service taps 308, with a loss of 59,304 gallons. After repairs had been made the consumption fell to 140,565 gallons per 24 hours, showing there had been a loss of 40 per cent. in the quantity supplied, and this in a sparsely built-up section of the City in which the number of taps and fixtures per house were a minimum. Had a test for leakage taken place in other sections of the City the percentage of loss would have undoubtedly risen much above this. The time is not far distant, unless proper means are taken to prevent waste, when the ratepayers will be called upon to provide large sums for improvements to the system, if the supply and pressure are to be maintained.

Respectfully yours,
C. L. FELLOWS,
Deputy City Engineer.

REPORT OF CHIEF ENGINEER OF MAIN PUMPING STATION

MAIN PUMPING STATION,
Toronto, December 31st, 1900.

C. H. RUST, ESQ.,
City Engineer.

DEAR SIR,—I beg to submit to you my Annual Report for the year 1900.

As you will notice by the following a considerable amount of repairs have been done, leaving the plant in a fairly good condition, with the exception of Nos. 1, 2, and 3 batteries of boilers in the old plant, especially Nos. 1 and 2 batteries, which should be replaced with new boilers if the old Worthingtons are to be kept in service. The brick work on all three batteries needs rebuilding, and in my opinion Nos. 1 and 2 are not worth rebricking. The boilers of No. 3 battery are in fairly good condition, but are starting to show signs of weakness at seams. These boilers are closely watched and kept clean. I might state, as I did in last year's report, about injection pipe for Nos. 4 and 5. This pipe should be extended further out into the bay so as to secure cleaner water for boilers as it is getting dirtier every year. I might also mention that a new floor is badly needed in old engine room. The walls of old and new boiler rooms will require whitewashing and considerable painting this coming spring.

I would also recommend that a fence be erected on wharf immediately above intake and discharge pipe for Nos. 4 and 5, to extend about fifty feet on each side so as to prevent bathing, if this pipe is to remain in its present position.

The following is a statement of repairs made to the plant at this station during the year.

REPAIRS TO ENGINE NO. 1.

Main pump examined. Took off all valves in both pumps, replaced all good ones, found a number of bad valves, spindles and seats, placed in good working order. Air pumps examined, put in new valves, springs and stems where required. Steam pipe and jacket joints made, packed all four, used 63 feet of ⅞-in. square hemp packing.

Had 25 feet 1-in. pipe put in discharge from trap.

Had new brasses put in connecting rods No. 1 air pumps.

Had holding down bolts and stays put in No. 1 air pumps.

Overhauled boiler feed pump, put in new rods.

Repairs to Engine No. 2.

Opened up main pumps, replaced several new valves and spindles.

Examined air pumps, packed all four using 90 feet of ⅞-in. square hemp packing, put in 13 new valves, 5 springs and 2 spindles.

Put 2½-in. valve on force injection.

Repairs to Engine No. 3.

Had all four plungers taken out of pumps, put new brass sleeves on plungers, had valve spindles turned up and bushed, ground valve spindles on bonnets, overhauled all valve motion on cylinders, examined air pumps, replaced valves and springs where required. Packed all pump glands and steam cylinder glands.

Had plunger taken out of No. 3 large boiler feed pump, filed up plunger rod, replaced, packed all glands, examined all valves.

Repairs to Engines Nos. 4 and 5.

On April 5th—Took down beam and main rod No. 4 engine, high pressure side, put in new liner, opened up receiver, examined tubes ; found them tight and in fairly good condition.

On June 11th—Engine No. 4 was shut down to make repairs to foundation on high pressure side main bed-plate. Took out about half of the old brick foundation, and had same rebuilt with hard brick and cement.

On August 16th—Stopped No. 5 engine, had new crank pin put in high pressure side, put new liner in side rod, low pressure side ; also made new joint on air pump steam cylinder bottom, east side.

On September 28th—Made and put in new liner on link rod, low pressure side No. 4 engine.

On November 13th—Re-babbitted beam end of main rod, high pressure side No. 4 engine.

On December 13th—Engine No. 4 was shut down to make repairs to main pillar block. Put in 10 1¼-in. studs and 4 new bolts.

Repairs to Batteries of Boilers Nos. 1 and 2.

Put new blow-off pipes and asbestos cocks on Nos. 1, 2, 3, and 4 boilers of No. 1 battery, and new blow-off pipes and asbestos cocks on Nos. 1 and 2 boilers of No. 2 battery, put two second hand asbestos cocks on Nos. 3 and 4 boilers of No. 2 battery ; had discharge from blow-off all lined up and put in good condition ; used 50 feet 2 inch pipe.

Took down all water columns on Nos. 1 and 2 boilers, cleaned out pipes, re-seated all feed valves in front of boilers ; made 20 new joints on steam pipes on top of Nos. 1 and 2 batteries of boilers.

Made 20 new joints on steam pipes on top of Nos. 1 and 2 batteries of boilers.

Put in back water feed on Nos. 1 and 2 batteries of boilers, used 40 feet of 1½-in. pipe, 35 feet of 1¼-in. pipe.

Repaired asbestos covering on steam pipes Nos. 1 and 2 batteries of boilers.

Had patch put on No. 4 boiler No. 1 battery.

Had seams calked on Nos. 2, 3 and 4 boilers of No. 1 battery.

Relined furnaces No. 1 battery of boilers.

REPAIRS TO FIRE BOILERS OF NO. 3 BATTERY.

Boilers washed out; took off cast iron flanges had steel flanges rivited on; for blow-off pipes put on all new blow-off pipes and repaired all blow-off cocks, put in back feed pipes, valves, etc.; combustion chambers bricked up, also had bridge walls repaired; straightened up north wall of battery.

REPAIRS TO BATTERIES OF BOILERS NOS. 4 AND 5.

The fire boxes of both batteries of boilers were newly relined with fire brick, and the combustion chambers rebricked, During the year 16 Hawley Down-draft Tubes and 19 grate Bars were put in furnaces.

Had hydrant put on 6-in. main, between Nos. 4 and 5 batteries, for washing boilers.

Had new wire cable put on damper attachments No. 5 battery.

Two new boiler tubes were put in No. 5 battery.

Had new feed pipe put down in front of boilers No. 5 battery, used 20 feet of 2½-in. pipe, 10 feet of 2-in. pipe and 66 feet of 1½-in. pipe.

Had new blow-off pipe put in No. 5 battery.

WORK DONE TO AND ABOUT OLD ENGINE HOUSE.

The sides and back walls of batteries of boilers Nos. 1, 2 and 3 have been whitewashed; the walls of boiler houses Nos. 1, 2 and 3 have been painted and whitewashed; the well has been thoroughly cleaned, cellar cleaned out and whitewashed; made new box for expansion joint on steam pipe. Electric light on lawn.

WORK DONE TO AND ABOUT NEW ENGINE HOUSE.

The walls of boiler houses Nos. 4 and 5 have been thoroughly cleaned, painted and whitewashed; cellar cleaned and whitewashed; the posts in west coal shed were covered with iron; closed in ventilators over Nos. 4 and 5 boilers, painted same; had new float made for well; necessary running repairs to boilers and attachments have been attended to.

Respectfully submitted,
ALEX. McRAE,
Chief Engineer.

SCHEDULES

WATER WORKS DEPARTMENT

Note.—For Schedule No. 1, "Cash Expenditure on Maintenance Account," etc., see page 156.
For Schedule No. 10, "Analysis of Expenditure at Main Pumping Station" see page 158.

SCHE

Statement of Water Pumped by E

Month.	No. of Days on which Engines were Working.			Number of Hours Working Each Month.						Number of Strokes for Each Engine per Month.			Quantity by
	No. 1.	No. 2.	No. 3.	No. 1.		No. 2.		No. 3.		No. 1.	No. 2.	No. 3.	No.
				h.	m.	h.	m.	h.	m.				
January	5	19	......	51	40	282	25	..	..	37,622	199,109	....	8,577
February	.. ...	2	......	....		5	05	..	..	....	4,421	....	....
March..............	9	......	......	93	00	..	..	..	..	62,672	....	....	14,289
April	2	2	......	10	15	8	25	..	..	7,211	5,702	....	1,644
May..	3	2	......	30	15	7	30	..	..	20,193	4,124	....	4,604
June	24	10	......	432	25	190	40	..	..	316,146	129,721	....	72,081
July	27	......	......	434	45	..	..	...	..	290,416	....	....	66,214
August	28	3	......	535	35	55	35	..	..	391,168	42,970	....	89,186
September..........	28	......	......	534	05	..	..	..	..	393,531	....	....	89,725
October	22	7	......	233	32	68	55	..	..	159,123	48,443	....	36,280
November	27	3	......	310	05	35	20	..	..	214,358	24,611	....	48,873
December	24	......	2	286	48	..	..	28	20	177,012	....	24,447	40,358
Totals......	199	48	2	2,952	25	653	55	28	20	2,069,452	459,101	24,447	471,835
Monthly averages ..	18	6	2	268	18	81	44	28	20	188,132	57,387	24,447	42,894,
Daily averages......	......	......	......	14	50	13	37	14	10	10,399	9,564	12,223	2,371,

LE No. 2.

ES Nos. 1, 2 and 3 for the Year 1900.

	Water Pumped per Month h Engine in Imp. Gals. Gross.		Total Quantity Pumped in Imp. Gals. Gross.	Percentage of Slip.	Total Quantity Pumped in Imp. Gals. Net.	Average Pressure on Pumps.	Average Level of Water in Well Below Zero.		Total Quantity of Coal Consumed per Month by Nos. 1, 2 and 3 Engines.		Coal Consumed while Banking Fires, Etc.		Coal Consumed while Pumping.	
	No. 2.	No. 3.				Lbs.	Ft.	In.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.
6	91,391,031	....	99,968,847	6	93,970,717	94.3	7	3	818	1,970	69	540	244	1,430
.	2,029,239	....	2,029,239	6	1,907,485	93.5	7	3	36	180	31	246	4	1,934
6	....	....	14,289,216	6	13,431,864	93.4	8	5	80	1,640	45	1,683	34	1,957
8	2,617,218	....	4,261,326	6	4,005,647	93.5	6	11	22	1,390	12	522	10	868
4	1,892,946	....	6,496,950	6	6,107,133	95.2	7	0	22	1,970	7	157	15	1,813
8	59,541,939	....	131,623,227	6	123,725,834	93.7	7	1	383	1,920	61	1,515	322	405
8	....	....	66,214,848	6	62,241,958	92.3	6	10	227	660	65	483	162	177
4	19,723,230	....	108,909,534	6	102,374,962	95.5	7	3	348	990	81	1,787	266	1,203
8	....	....	89,725,068	6	84,341,564	95.4	7	3	229	1,490	10	159	219	1,331
4	22,235,337	....	58,515,381	6	55,004,459	92.9	7	3	169	310	25	1,829	143	481
4	11,296,449	....	60,170,073	6	56,559,869	94.5	7	8	199	1,070	52	488	147	582
6	....	10,909,242	51,267,978	6	48,191,900	94.0	7	8	257	1,550	132	551	125	999
6	210,727,389	10,909,242	693,471,687	....	651,863,386	1,128.2	58	10	2,292	1,140	594	1,960	1,697	1,180
6	26,340,923	10,909,242	57,789,307	....	54,321,948	94.0	7	3	191	95	49	193	141	123
0	4,390,154	5,454,621	2,785,026	....	2,617,925	....	....		9	16	2	779	6	1,635

SCHEDU

Statement of Water Pumped by Eng

Month.	No. of Days on which Engines were working.		Number of Hours working each Month.		Number of Strokes made by Engines each Month.		Quantity of Water each Month by Engine—Impe Gallons—Gro	
	No. 4.	No. 5.	No. 4.	No. 5.	No. 4.	No. 5.	No. 4.	N
			h. m.	h. m.				
January	22	31	478 30	738 55	1,011,467	1,640,172	213,419,537	344
February	28	28	663 30	666 30	1,408,008	1,475,428	297,089,688	309
March	31	31	737 00	729 50	1,615,636	1,654,920	340,899,196	347
April	30	30	707 00	704 45	1,476,186	1,519,292	311,475,668	319
May	31	31	734 35	727 10	1,555,992	1,599,810	328,314,312	335
June	24	30	543 30	718 10	1,153,162	1,600,031	243,317,182	336
July	31	31	733 10	731 15	1,576,788	1,604,340	332,702,268	336
August	31	30	732 50	678 05	1,569,320	1,487,587	331,126,520	312
September	30	30	708 55	708 15	1,521,709	1,557,833	321,080,599	327
October	31	31	738 25	736 30	1,515,783	1,574,685	319,830,213	330
November	30	30	708 00	712 50	1,403,673	1,522,966	296,175,003	319
December	30	31	683 40	740 05	1,331,553	1,560,121	280,957,683	327
Totals	349	364	8,169 05	8,587 20	17,139,277	18,797,185	3,616,387,869	3,947
Monthly Averages	29.0	30.3	680 45	715 36	1,428,273	1,566,432	301,365,655	328
Daily Averages	......	......	23 24	23 35	49,109	51,640	10,362,142	10

BOSTON SOCIETY OF CIVIL ENGINEERS.

LE No. 3.

INES Nos. 4 AND 5 FOR THE YEAR 1900.

Pump'd each ...rial ...ss.		Total Quantity Pumped by Nos. 4 & 5 Engines. Imp. Gallons Gross.	Percentage of Slip.	Total Quantity Pumped. Imp. Gallons Net.	Average Pressure on Pumps.	Average Lift by Engines.		Total Quantity of Coal used under Boilers each Month.		Coal Consumed for Banking Fires.		Coal Consumed while Pumping.	
o. 4.	o. 5.				Pounds.	Ft.	In.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.
,419,3	.436,540	557,856,077	2	546,698,956	95.0	23	8	757	380	55	710	701	1,670
,08	839,880	606,929,568	2	594,790,977	92.5	24	4	775	1,220	49	1,997	725	1,223
,399,1	533,200	688,432,396	2	674,663,749	92.9	24	3	912	830	44	1,284	867	1,546
475,6	051,320	630,526,988	2	617,916,449	92.9	23	0	783	635	50	000	733	635
314,31	960,100	664,274,412	2	650,988,924	94.0	23	0	827	1,440	34	344	793	1,096
317,1	006,510	579,323,692	2	567,737,219	93.7	23	6	734	1,890	24	360	710	1,530
702,26	911,400	669,613,668	2	656,221,395	94.5	24	0	821	1,430	24	1,972	796	1,458
126,5	393,270	643,519,790	2	630,649,395	94.6	23	7	881	70	24	1,962	856	108
180,5	144,930	648,225,529	2	635,261,019	94.2	24	9	792	30	25	319	766	1,711
130,21	683,850	650,514,063	2	637,503,782	91.9	24	3	841	1,430	55	730	786	700
75,06	822,860	615,997,863	2	603,677,906	93.3	24	3	826	1,590	53	1,159	773	431
57,08	625,410	608,583,093	2	596,411,432	94.0	24	2	827	480	51	1,571	775	909
87,3	409,270	7,563,797,139	2	7,412,521,197	1,122.7	286	9	9,781	1,425	494	408	9,287	1,017
65,65	950,772	630,316,428	2	617,710,100	93.5	23	10	815	285	41	367	773	1,918
62,1	844,530	21,216,822	....	20,792,485	....	....		27	876	1	772	26	103

SCHEDULE No. 4.

Record of Water Re-pumped at High Level Station for the Year 1900.

Month.	Number of Hours Engines working.		Number of Revolutions made by Pumps.		Quantity of Water Re-pumped.		Total Quantity of Water Re-pumped by both Engines in Imp. Gallons Gross.	Percentage of Slip.	Total Quantity of Water Re-pumped Imp. Gallons Net.	Average Pressure on Force Mains.	Average Pressure on Suction Mains.	Total Quantity of Coal Consumed under Boilers.		Coal Consumed for Banking Fires, Raising Steam, etc.		Coal Consumed while Pumping.	
	No. 1.	No. 2.	No. 1.	No. 2.	No. 1.	No. 2.											
	h. m.	h. m.								Lbs.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.
January	507 00	516 00	1,261,781	1,090,673	57,411,035	49,080,285	106,491,320	1	105,426,407	54.58	17.03	116	1,375	11	1,100	105	275
February	448 00	475 30	1,412,846	726,979	64,284,493	32,714,055	96,998,548	1	96,028,563	54.54	16.98	101	1,975	10	300	91	1,675
March	496 00	525 15	1,636,310	760,142	74,452,105	34,206,390	108,658,495	1	107,571,911	54.55	17.47	113	550	10	1,700	102	850
April	480 00	510 00	1,625,567	715,499	73,963,298	32,197.455	106,160,753	1	105,099,146	54.61	18.18	111	1,050	10	1,700	100	1,350
May	496 00	527 30	1,687,503	804,018	76,781,386	36,180,810	112,962,196	1	111,832,575	54.63	17.00	113	550	11	1,100	101	1,450
June	480 00	510 00	1,667,305	787,067	75,862,377	35,418,015	111,280,392	1	110,167,589	54.53	16.05	113	1,775	10	1,700	103	075
July	469 45	521 00	1,512,715	762,460	68,828,532	34,310,700	103,139,232	1	102,107,840	54.32	15.02	111	175	11	1,100	99	1,075
August	496 00	527 00	1,622,161	821,494	73,808,325	36,967,230	110,775,555	1	109,667,800	54.59	16.43	109	1,550	10	1,700	98	1,850
September	480 00	510 00	1,598,302	956,696	72,722,741	43,051,320	115,774,061	1	114,616,321	54.61	16.52	114	1,525	10	1,700	103	1,825
October	496 00	527 00	1,604,040	967,462	72,983,820	43,535,790	116,519,610	1	115,354,414	54.44	15.33	117	1,475	11	400	106	1,075
November	480 00	510 00	1,505,736	847,361	68,510,988	38,131,245	106,642,233	1	105,575,811	54.58	16.88	108	400	10	1,700	97	700
December	496 00	527 00	1,532,928	883,209	69,648,224	39,744,405	109,392,629	1	108,298,703	54.56	16.52	112	1,625	11	400	101	1,225
Totals	5,824 45	6,185 45	18,667,194	10,123,060	849,257,324	456,537,700	1,304,795,024	1	1,291,747,080	654.45	199.41	1,345	025	132	600	1,212	1,425
Monthly Averages	485 23	515 28	1,555,599	826,921	70,771,448	38,044,808	108,732,918	1	107,645,590	54.54	16.61	112	168	11	050	101	118
Daily Averages	15 57	16 48	51,143	27,734	2,326,732	1,250,788	3,574,780	1	3,539,033	54.54	16.61	3	1,369	....	724	3	644

SCHEDULE No. 5.

Comparative Statement of Coal Consumed and Water Pumped by Months for the Years 1899 and 1900.

MONTH.	1899.							1900.						
	Engine No.	Water.		Coal.				Engine No.	Water.		Coal.			
		Quantity Pumped.	Total Quantity Pumped.	Quantity Consumed.		Total Consumption.			Quantity Pumped.	Total Quantity Pumped.	Quantity Consumed.		Total Consumption.	
		Imp. Gals. Net.	Imp. Gals. Net.	Tons.	Lbs.	Tons.	Lbs.		Imp. Gals. Net.	Imp. Gals. Net.	Tons.	Lbs.	Tons.	Lbs.
January	1, 2 and 3	....	641,516,538	48	1,430	960	660	1, 2 and 3	93,970,717	640,669,673	313	1,970	1,071	350
	4 and 5	641,516,538		911	1,230			4 and 5	546,698,956		757	380		
February	1, 2 and 3	57,311,740	652,293,367	204	470	1,023	1,650	1, 2 and 3	1,907,485	596,698,462	36	180	811	1,400
	4 and 5	594,981,627		819	1,180			4 and 5	594,790,977		775	1,220		
March	1, 2 and 3	5,098,887	643,371,256	21	1,120	927	235	1, 2 and 3	13,431,864	688,095,613	80	1,640	993	470
	4 and 5	638,272,369		905	1,115			4 and 5	674,663,749		912	830		
April	1, 2 and 3	20,936,901	597,105,138	72	610	933	30	1, 2 and 3	4,005,647	621,922,096	22	1,390	806	25
	4 and 5	576,168,237		860	1,420			4 and 5	617,916,449		783	635		
May	1, 2 and 3	3,383,899	626,835,151	19	1,590	922	1,270	1, 2 and 3	6,107,133	657,096,057	22	1,970	850	1,440
	4 and 5	623,451,252		902	1,680			4 and 5	650,988,924		827	1,440		
June	1, 2 and 3	9,764,205	644,408,051	43	20	958	900	1, 2 and 3	123,725,834	691,463,053	383	1,920	1,118	1,810
	4 and 5	634,643,846		915	880			4 and 5	567,737,219		734	1,890		
July	1, 2 and 3	43,359,079	704,862,259	131	380	1,168	1,450	1, 2 and 3	62,241,958	718,463,353	227	660	1,049	190
	4 and 5	661,503,180		1,037	1,070			4 and 5	656,221,395		821	1,430		
August	1, 2 and 3	49,081,437	725,295,428	185	750	1,214	660	1, 2 and 3	102,374,962	733,024,357	348	990	1,229	1,060
	4 and 5	676,213,991		1,028	1,910			4 and 5	630,649,395		881	70		
September	1, 2 and 3	21,209,936	664,548,524	59	490	1,061	570	1, 2 and 3	84,341,564	719,602,583	229	1,490	1,021	1,520
	4 and 5	643,338,588		1,002	80			4 and 5	635,261,019		792	30		
October	1, 2 and 3	17,012,113	632,087,657	35	30	965	630	1, 2 and 3	55,004,459	692,508,241	169	310	1,010	1,740
	4 and 5	615,075,544		930	600			4 and 5	637,503,782		841	1,430		
November	1, 2 and 3	30,311,410	631,573,503	114	1,680	1,045	920	1, 2 and 3	56,559,869	660,237,775	199	1,070	1,026	660
	4 and 5	601,262,093		930	1,240			4 and 5	603,677,906		826	1,590		
December	1, 2 and 3	176,257,817	660,451,345	452	490	1,160	1,960	1, 2 and 3	48,191,900	644,603,332	257	1,550	1,085	30
	4 and 5	484,193,528		708	1,470			4 and 5	596,411,432		827	480		
Totals	....	....	7,824,348,217	12,341	935	12,341	935	....	....	8,064,384,595	....		12,074	565
Daily averages	....	....	21,436,569	....		33	1,624	....	....	22,094,204	....		33	160

SCHEDULE No. 6.

COMPARATIVE STATEMENT SHOWING NUMBER OF GALLONS PUMPED, QUANTITY AND COST OF FUEL, ETC., FROM 1876 TO 1900, INCLUSIVE.

YEAR.	Total Water Pumped — Imp. Gals.	Quantity of Fuel. Lbs.	Total Cost of Fuel.		Average Daily Quantity of Water Pumped — Imp. Gals.	Average Daily Consumption of Coal. Lbs.	Water Pumped per Pound of Fuel. — Imp. Gals.
			$	c.			
1876	1,625,139,876	6,998,282	19,645	75	4,451,202	19.093	232.55
1877	2,633,433,932	10,407,992	25,556	29	7,214,887	28,515	253.02
1878	1,417,370,918	8,120,000	15,196	20	3,883,208	22,246	174.55
1879	1,610,104,542	10,872,211	19,313	07	4,411,245	29,787	148.09
1880	1,785,859,706	11,694,808	28,455	72	4,879,422	31,953	152.17
1881	1,910,430,419	12,391,874	31,410	04	5,234,056	33,950	154.18
1882	2,108,933,115	11,685,556	30,170	64	5,777,899	32,015	180.47
1883	2,809,965,484	17,266,679	43,529	08	7,698,511	47,306	162.74
1884	3,645,412,082	19,920,782	52,525	56	9,960,224	54,428	183.00
1885	3,537,482,598	18,644,465	46,589	27	9,691,733	51,081	189.73
1886	4,134,376,998	19,285,371	41,979	32	11,327,060	52,837	214.37
1887	4,417,938,169	23,283,900	50,051	85	12,103,940	63,791	189.74
1888	4,041,964,514	20,457,935	46,600	77	11,073,875	56,049	197.57
1889	4,148,781,634	19,231,940	44,135	10	11,366,525	52,690	215.72
1890	5,249,760,226	34,615,830	56,239	99	14,382,904	67,536	212.96
1891	6,207,656,403	29,300,240	60,012	77	17,007,275	80,291	211.86
1892	6,659,925,650	34,505,875	71,805	25	18,246,371	94,278	193.00
1893	6,646,021,488	26,013,840	64,702	86	18,208,278	71,270	255.47
1894	6,589,492,142	26,822,145	54,902	85	18,053,403	73,485	245.67*
1895	6,639,680,218	21,178,879	40,221	85	18,190,902	58,024	313.5
1896	6,781,187,980	18,606,508	25,307	90	18,527,836	50,837	364.4
1897	6,723,757,030	20,711,250	26,880	50	18,421,253	56,743	324.64
1898	7,136,334,102	22,100,145	27,572	00	19,551,600	60,548	322.91
1899	7,824,348,217	24,682,935	26,684	57	21,436,569	67,624	316.99
1900	8,064,384,595	24,148,565	38,668	54	22,094,204	66,160	333.95

* A larger percentage was allowed for slip in 1894 and 1895, than in other years.

SCHEDULE No. 7.

Quantity of Water Pumped and Quantity Consumed During each Month of 1900, with Amount of Daily Consumption.

Month.	Total Quantity Pumped per Month in Imperial Gallons	Quantity Stored in Reservoir at end of each Month. Imperial Gallons	Quantity Consumed during each Month. Imperial Gallons	Average Daily Consumption of Water. Imperial Gallons	Average Daily Consumption of Coal at Main Pumping Station	
					Tons.	Lbs.
Stored in Reservoir on 31st December, 1899		26,872,689				
January	640,669,673	25,628,538	641,913,824	20,706,897	34	1,108
February	596,698,462	21,786,475	600,540,525	21,440,733	28	1,978
March	688,095,613	23,185,137	686,696,951	22,151,514	32	079
April	621,922,096	26,043,256	619,063,977	20,635,465	26	1,734
May	657,096,057	24,608,074	658,531,239	21,242,943	27	884
June	691,463,053	18,057,170	698,013,957	23,267,132	37	593
July	718,463,353	26,872,689	709,647,834	22,891,865	33	1,683
August	733,024,357	22,981,860	736.915,186	23,771,457	39	1,324
September	719,602,583	26,250,614	716,333,829	23,877,794	34	117
October	692,508,241	10,945,730	707,813,125	22,832,681	32	1,217
November	660,237,775	26,665,331	644,518,174	21,488,939	34	422
December	644,603,332	25,217,904	646,050,759	20,840,347	35	000
Totals	8,064,384,595				396	1,139
Averages	672,032,049			22,094,204	33	095

SCHEDULE No. 8.

COMPARATIVE STATEMENT SHOWING INCREASE OF DEPARTMENT YEARLY, 1875 TO 1900 INCLUSIVE.

YEAR.	Average Daily Consumption of Water.	Population.	Average Daily Consumption of Water per Capita for all Purposes.	Total Number of House Services in use in each year.	Number of House Services put in each year.	Total Number of Hoists in use in each year.	Total Number of Meters in use each year.	Total Number of Miles of Mains in use each year.	Average Pressure on Pumps.				
									No. 1, Worthington Engine.	No. 2, Worthington Engine.	No. 3, Inglis & Hunter.	No. 4, Blake Engine.	No. 5, Blake Engine.
			Gallons.					Miles.					
1875	3,424,000	68,678	49.86	2,769	842	....	....	49.810	88.10	....	....	....	....
1876	4,451,202	71,693	62.09	3,512	740	....	....	80.250	88.78	97.51	....	....	....
1877	2,812,000	67,386	41.74	4,518	1,006	....	....	107.570	83.33	97.69	....	....	....
1878	3,883,208	70,867	54.79	6,707	2,189	28	....	110.240	89.65	96.64	....	....	....
1879	4,411,245	73,813	59.76	8,568	1,861	47	....	111.290	95.28	99.04	....	....	....
1880	4,879,422	75,110	64.96	9,582	1,014	66	....	113.312	98.22	99.52	....	....	....
1881	5,234,056	76,934	68.03	12,236	2,654	79	....	115.518	96.32	100.78	....	....	....
1882	5,777,899	81,372	71.01	14,062	1,826	94	....	116.145	94.85	101.66	....	....	....
1883	7,698,511	91,796	83.87	16,276	1,766 448	109	....	131.352	94.27	103.49	....	....	....
1884	9,960,224	105,211	94.66	18,363	2,087	130	....	138.301	99.146	107.036	....	....	....
1885	9,706,127	111,800	86.82	20,707	2,344	140	195	143.257	98.84	106.45	103.88	....	....
1886	11,344,337	118,403	95.81	23,643	2,936	152	256	156.042	104.88	104.92	104.67	....	....
1887	12,060,610	126,169	95.59	26,893	3,315	176	332	165.894	....	....	....	....	....
1888	11,069.784	166,809	66.36	29,883	3,055	174	897	182.625	93.41	92.36	94.57	....	....
1889	11,378,962	175,000	65.02	34,056	3,288	222	1,347	212.832	94.25	94.82	94.92	....	....
1890	14,434,722	185,000	78.02	36,192	2,191	229	1,479	229.257	92.83	93.55	93.58	....	....
1891	17,007,275	188.904	90.03	38,250	2,111	230	1,544	237.967	93.33	93.66	93.91	....	....
1892	18,246,371	188,904	96.59	39,401	1,200	288	1,535	242.561	....	....	....	....	....
1893	18,208,278	188,904	96.38	39,927	526	300	1,600	244.964	94.18	94.18	94.18	96.37	....
1894	18,056,881	188,904	95.58	40,326	399	258	1,580	245.478	94.88	94.88	94.88	95.24	95.24
1895	18,192,063	190,000	95.74	40,683	357	....	1,500	....	94.88	94.88	94.88	95.05	95.05
1896	18,527,836	195,987	94.53	40,951	313	230	1,553	249.627	94.5	94.5	94.5	95.4	95.4
1897	18,378,722	195,987	93.77	41,315	364	230	1,553	252.646	95.1	95.1	95.1	95.7	95.7
1898	19,576,957	200,000	97.88	41,838	523	230	1,580	255.625	95.3	95.3	95.3	95.9	95.9
1899	21,436,509	225,000	95.27	42,552	714	230	1,598	257,613	94.9	94.9	94.9	95.3	93.3
1900	22,094,204	235,000	94.01	43,242	690	230	1,700	258,774	94.0	94.0	94.0	93.5	93.5

SCHEDULE No. 9.

RECORD OF GAUGING AT ROSEHILL RESERVOIR FOR EACH MONTH OF 1900.

Month.	Elevation of Lowest Water Above Zero. Ft. In.	Elevation of Highest Water Above Zero. Ft. In.	Average Elevation Above Zero. Ft. In.	Average Depth in Reservoir. Ft. In.	Average Contents in Imperial Gallons.
January	209 10	214 8	212 7	16 7	24,404,791
February	211 6	214 4	213 3	17 3	26,043,256
March	210 7	212 10	211 10	15 10	22,583,399
April	212 4	214 4	213 6	17 6	26,665,331
May	211 0	214 3	212 10	16 10	25,014,627
June	209 6	214 3	211 10	15 10	22,583,399
July	210 7	214 5	212 11	16 11	25,217,904
August	209 6	214 1	212 2	16 2	23,388,414
September	210 3	214 0	212 6	16 6	24,201,530
October	213 1	214 5	213 3	17 3	26,043,256
November	207 0	214 1	212 8	16 8	24,608,074
December	213 0	214 5	213 5	17 5	26,457,972
Averages	....	....	212 8	16 8	24,767,662

NOTE.—The return for October is for a period of 20 days only, the Reservoir being shut off for annual cleaning on October 20th. The water did not obtain its normal level until the 7th November.

The average depth of water in the Reservoir for the year (exclusive of 10 days in October) was 16 ft. 8 in., equal to an elevation of 212 ft. 8 in. above zero.

SCHEDULE No. 11.

STATEMENT OF MAINS LAID DURING THE YEAR 1900.

Street, Avenue, Etc.	Side of Street.	Location.	Length in Feet.
16-IN. STEEL PIPE:			
Queen east	Centre....	Across the Don Bridge and Railway tracks	212
16-IN. CAST IRON PIPE:			
Queen east	North.....	Connection between 16-in. steel pipe and 12-in. main to road west of Don.	50
Queen east	North	Connection between 16 in. steel pipe and 6-in. cast iron main on n.s. of Queen e. at a point 76 ft. w. of Davies Ave.	63
		Total	113
6-IN SUB-MAINS:			
Englewood Av	North.....	From Pape Ave. to Jones Ave...	1,311
Frichott..........	North.....	" Yonge St. to McMurrich St	421¼
King	North.....	" 16-in. main to 48½ ft. w. of a point w. of King and Queen Sts.	231
Lowther Av	South	" St. George St. to w. line Huron St.	452
Lowther Av	South	" Walmer Rd. to 139 ft. east	271
Nanton Cres......	West	" 460 ft n. of Date Ave. 212 ft. north.	212
Queen east	North	" 16-in. main to Davies Ave	92
Roxborough (1899).	North	Extension to 108 ft. west	108
St. George........	West	From 521 ft. n. of Lowther Ave. to 281 ft. n.	281
Vine	West......	" Front St. to Mill St	543
Waverley Rd	East	" 679 ft. s. of Queen St. to 756 ft. s...	756
		Total	4,678¼
4-IN. SUB-MAINS:			
Trefford Pl	North	From Claremont St. to Bellwoods Ave.....	314¼
Waverley Rd	East	" Queen St. 195 ft. n. to City limits...	209½
		Total	523¾
2-IN. SERVICE MAINS:			
Kew Beach	North	From Lee Ave. to 650 ft. west......	670

6-INCH MAINS ABANDONED DURING THE YEAR 1900.

Street, Avenue, Etc.	Side of Street.	Location.	Length in Feet.
King east	North	From Junction with Queen St. e. pipe to 55 ft. west.	55
Queen east	South	" Davies Ave. to Junction with King St. pipe.	270
		Total	325

Mains throughout the City of all sizes and descriptions, including those on Streets, Government, Private and other Property, at end of the Year.

Size.	Total length in feet in use at end of 1899.	Put in during 1900.	Abandoned during 1900.	Total length in feet in use at end of 1900.
36-inch mains	2,780	....	....	2,780
30-inch "	11,292	....	....	11,292
24-inch "	27,779	....	....	27,779
20-inch "	3,953	....	....	3,953
16-inch "	....	325	....	325
*12-inch "	245,601¼	....	....	245,601¼
10-inch sub-mains	14,195	....	....	14,195
* 8 inch "	7,275	....	....	7,275
* 6-inch "	979,766¼	4,678¼	325	984,119½
* 4-inch "	43,892¼	523¾	....	44,416
3-inch "	10,586	....	....	10,586
2-inch and 1-inch service mains	4,908½	670	....	5,578½
Old 8-inch cast iron mains	6,085	....	....	6,085
Old 8-inch cement mains	1,240	....	....	1,240
	1,359,353¼	6,197	325	1,365,225¼

Total length in use at end of the year—1,365,225¼ feet, or 258 564 miles.

*12-inch on Avenue Road classed on street and private property also and 8-inch, 6-inch, 4-inch revised and difference in sizes and measurements in Parkdale corrected.

SCHEDULE No. 12.

STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1900.

NEW HYDRANTS PLACED IN POSITION.

Street, Avenue, Etc.	Side of Street.	Location.
Nanton Crescent..	West	57½ ft. south of Elm Avenue
Shaw Street . ..	"	12 ft. north of Argyle Street.
St. George Street..	"	598 ft. north of Lowther Avenue.
" " ..	"	802 ft. north of Lowther Avenue.
Vine Street.......	"	87 ft. south of Front Street.
"	"	108 ft. north of Mill Street.
Waverley Road ..	East	20 ft. north of Lake Shore Road.
"	"	481½ ft. north of Lake Shore Road.
Gutta Percha Co..	"	In yard in front of new building.
3-WAY HYDRANTS REPLACING 2-WAY ALREADY IN POSITION.		
Lansdowne Auenue	West	350 ft. north of Queen Street west.
Queen Street W...	South	Opposite West Lodge Avenue.
"	"	350 ft. east of Strachan Avenue.
Wellington Street..	"	400 ft. east of York Street.
4-WAY HYDRANTS REPLACING 2-WAY ALREADY IN POSITION.		
Front Street......	North	250 ft. west of Bay Street.
Wellington Street..	South	140 ft. west of Bay Street.

THE FOLLOWING 2-WAY HYDRANTS HAVE BEEN REMOVED FROM OFF THE STREETS DURING 1900:

Street.	Side of Street.	Location.
Argyle Street......	North	10 ft. west of Shaw Street.
Front Street......	North	250 ft. west of Bay Street.
Lansdowne Avenue	West	350 ft. north of Queen Street.
Queen Street......	South	opposite West Lodge Avenue.
"	South	350 ft. east of Strachan Avenue.
Wellington Street..	South	140 ft. west of Bay Street.
"	South	400 ft. east of York Street.

SUMMARY OF HYDRANTS.

Number of Hydrants of all kinds on streets at end of 1899	2,972
" " on private and other property at end of 1899	86
	3,058
There was removed from off the streets, 1 2-way Hydrant, 4 2-way Hydrants were replaced by 3-way Hydrants, and 2 2-way Hydrants were replaced by 4-way Hydrants during 1900	7
	3,051
*Number of additional Hydrants set on streets during 1900	8
4 way Hydrants replacing 2 ways already set on streets	2
3 " " " 2 " " " " "	4
*2 " " set on private property during 1900	1
Total number of Hydrants in use at end of 1900	3,066

*The total number of new Hydrants placed during the year 1900 was 9 2-way Hydrants.

A large number of old 2 way Hydrants were replaced during the year with the new improved body 2 way Hydrants.

SCHEDULE No. 13.

TOTAL LIST OF ALL VALVES PLACED IN POSITION DURING THE YEAR 1900, SHEWING THE SIZE, POSITION, ETC.

Street, Avenue, Etc.	Side of Street.	Location.
12 IN. STOP VALVES:		
Farley Av	North	West line of Tecumseth Street.
Queen Street west.	South	East " Roncesvalles Avenue.
"	"	East " Dundas Street.
6-IN. STOP VALVES:		
Dorset Street	West	North line of Wellington Street.
Englewood Av....	North	East " Pape Avenue.
Englewood Av....	"	West " Jones Avenue.
Farley Av........	South	East " Maud Street.
Frichott Street....	North	West " Yonge Street.
Frichott Street....	"	East " McMurrich Street.
King Street	"	At apex with Queen Street East.
Lowther Av	South	East line of Walmer Rd.
Lowther Av	"	East " St. George Street.
Lowther Av	"	West " St. George Street.
Tate Street	"	West " Vine Street.
Turner Av........	North	East " Walnut Avenue (near hydrant).
Vine Street	West........	South " Front Street.
Vine Street	"	North " Mill Street.
Vine Street	East	On main to Davies Co. (Tate Street).
William Street....	"	North line of Anderson Street.
William Street....	"	Opposite No. 82.
4-IN. STOP VALVES:		
Treford Pl........	North	West line of Claremont Street.
Treford Pl........	"	East " Bellwoods Avenue.
Waverley Rd.	East	North " Queen Street East.

THE FOLLOWING STOP VALVES HAVE BEEN TAKEN OUT OR ABANDONED DURING THE YEAR 1900.

Street, Avenue, Etc.	Side of Street.	Location.
8-IN. STOP VALVE:		
King Street east ..	South	Near the west side of Don Bridge (abandoned).
6-IN. STOP VALVES:		
Queen Street east..	South	Opp. west line of Davies Avenue.
Queen Street west.	"	Opp. west line of Sunnyside Avenue.

Summary of Valves on Streets at End of 1900.

Size and Description.	In use at end of 1899.	Put in during 1900.	Taken out during 1900.	Total at the end of 1900.
Stop Valves:				
36 inches	4	......	......	4
30 "	8	......	......	8
24 "	17	......	......	17
20 "	2	......	......	2
*12 "	451	3	......	454
10 "	6	......	......	6
9 "	6	......	......	6
8 "	12	......	1	11
6 "	1,707	17	2	1,722
*4 "	72	3	......	75
*3 "	29	......	......	29
Totals	2,314	23	3	2,334
Check Valves.				
36 inches	5	......	......	5
*30 "	4	......	......	4
*24 "	1	......	......	1
20 "	1	......	......	1
*12 "	11	......	......	11
*6 "	44	......	......	44
Totals	66	......	......	66

* Corrected to end of 1900.

SCHEDULE No. 14.

STATEMENT OF HOUSE SERVICES LAID DURING 1900.

Name of Street.	Size of Services.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Arnold Av	1							
Adelaide, west				2	1			
Avenue Rd	5	5		1				
Admiral Rd	1	2						
Abell	1							
Albany Av	4			1				
Arthur	1	5						
Argyle	1							
Augusta Av	1							
Bismarck Av	1							
Bloor, west	2		2	1	1			
Bellwoods Av	5							
Beatty Av			1					
Brunswick Av	4	9						
Bathurst	1	6		1				
Bruce	1							
Bartlett Av	2							
Brock Av				2				
Berkeley	3							
Bedford, Rd				1				
Bernard Av		2						
Belmont	1							
Broadview Ave	7							
Bay		2						
Berryman	1							
Brooklyn Av	6							
Borden	3							
Badgerow Av	2							
Bleeker	2							
Bolton Av	2							
Boustead Av	2							
Bond				1				
Bank	2							
Columbus Av	3							
Cummings	1							
Crescent Rd			7					
Chesnut	1							
Chesnut Pl	1							
Cowan Av	3	3						
Church				2				
Clinton	4							
Chamberlain Av					1			
Clarmont	4							
Crawford	3							
Chicora Av	3							

HOUSE SERVICES LAID DURING 1900.—*Continued.*

Name of Street.	Size of Service.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Christie	1							
Caer Howell				1				
Carlaw Av	1							
Camden		1						
College	2				1			
Charles				1				
Cottingham		1						
Cypress				1				
Close Av	1							
Centre Av	1							
Court					1			
Delaware Av	9	7						
Dunbar Rd		4	2	1				
Dovercourt Rd	3	2	2					
Dufferin	6				1			
Davenport Rd	7							
Devonshire Pl.				1				
Duchess			1					
Danforth Av	1							
Dupont	2	5						
Dundas	1	3						
Dowling Av		1	2					
Dunedin	1							
Euclid Av	7	2						
Empress Crest	2							
Elm Av				1				
Elm Grove Av		1						
Esplanade, west		1						
Esplanade, east				1				
Edith	1							
Eastern Av	5				1			1 8-in.
Evans Av		1						
Elizabeth	3							
Exhibition Grounds	1		2					
Edwin Av	2			1				
Englewood Av	1							
Farley Avenue	1		1	1				
Front, west							2	
Florence	2							
Fuller	7	1						
Franklin Av	2							
Fenning	2							
Fermanagh Av				1				
Glen Rd			1	1	1			
Givens	2							
Gerrard, east	6	1						
Gwynne Ave	1							
George	2			1				

HOUSE SERVICES LAID DURING 1900.—*Continued.*

Name of Street.	Size of Service.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Gould				1				
Golden Av	6	1						
Grenville		1						
Garnet Ave	1							
Hazelton Av	2							
Howland Av	8	8						
Huron	3	4						
Harvard Av	1	1						
Hogarth Av	1							
Hallam Av				1				
Howland Rd	1							
Hackney	3							
Huxley		2						
Harrison	1							
Howard Park Av				1				
Indian Rd		1	1					
Jameson Ave	2	4						
Jones Av	3							
Jarvis				1				
John	1			1				
King, west		2		1	1		1	
Kew Beach	15							
Ketchum Av			1					
Knox	1							
Lansdowne Av	6							
Lippincott	2							
Lucas	1							
Leonard Av	1							
Lowther Av		2	3	3				
Lewis	4							
Lombard			1					
Louisa	1							1
Langley Av	1							
Lee Av	3							
Leslie	1			1				
Leopold		2						
London	1							
Mcpherson	2							
Macdonall Av	1							
Manning Av	7	2						
Markham	9	5						
Millstone Lane			1	1			1	
Maple Ave			1	1				
Massey	2							
Madison Av		5	1	1				
Morse	2							
Manchester Av	1							
Marshall	2							

House Services Laid During 1900.—*Continued.*

Name of Street.	Size of Service.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Marion		1						
Muir Av	1							
Mill	3							
Melinda					1			
Maynard Av	2							
McKenzie Av			1					
McKenzie Crest	1							
McGee	1							
McMurrich				1				
Niagara								1
North Markham	1							
Nanton Crest			1					
Northumberland	1							
North Beaconsfield	3							
Ossington Av	3	1						
Oxford	1							
O'Hara Av		1						
Parliament	2		1					
Pape Av	1			1				
Park Rd	1		1					
Price	4							
Prince Arthur Av			1					
Power	2	1						
Pears Av	6							
Pearl				1				
Perth Av	2		1					
Palmerston Av	1							
Portland				1				
Piper				1				
Queen, east	13	1						
River	2							
Russett Av	1							
Ross		1						
Rusholme Rd				1				
Robert	2	3		1				
Roylat	1							
Russell							1	
Roxboro, east		2						
Rosedale Rd				1				
Scollard	2							
St. Helen's Av	1							
Sumach	12							
Simpson Av	2							
Seaforth Av	1							
St. Clarens Av	6							
Springhurst Av	1	2						
Spruce	1							

HOUSE SERVICES LAID DURING 1900.—*Continued.*

Name of Street.	Size of Service.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
St. Albans	......	1	......	......	1	......	......	......
Sussex	9	1	......	......	......	......	......	......
Shaftesbury Av	1	......	......	......	......	......	......	......
Steiner	1	......	......	......	......	......	......	......
Surrey Pl	......	......	......	1	......	......	......	......
St. David	1	......	......	......	......	......	......	......
St. George	......	......	2	1	......	......	......	......
Spadina Av	......	4	1	......	......	......	......	......
St. Patrick	1	1	......	......	......	......	......	......
Shaw	5	1	......	......	......	......	......	......
Sackville	3	......	......	......	......	......	......	......
Stewart	2	......	......	......	1	......	......	......
Sheppard	......	......	......	1	1	......	......	......
St. Joseph	......	......	......	......	1	......	......	......
South Drive	......	......	......	1	......	......	......	......
Sherbourne	......	......	1	......	......	......	......	......
Strachan Av	......	......	......	......	......	......	......	1
Summerhill	3	......	......	......	......	......	......	......
Spadina Pl	2	......	......	......	......	......	......	......
Tyndall Av	......	8	......	......	......	......	......	......
Taylor	3	......	......	......	......	......	......	......
Tate	2	......	......	......	......	......	......	......
Ulster	1	......	......	......	......	......	......	......
Victoria	1	......	......	......	......	......	......	......
Vine	1	......	......	......	......	......	......	......
West Marion	1	......	......	......	......	......	......	......
Wellington, west	......	......	......	......	......	......	1	1
William	3	......	......	......	......	......	......	......
Wilson Av	1	......	......	......	......	......	......	......
Westmoreland Av	3	......	......	......	......	......	......	......
Waverley Rd	4	......	......	......	......	......	......	......
Wellesley Crest	......	......	1	......	......	......	......	......
Wellesley	......	2	......	......	1	......	......	......
Wellesley Pl	......	......	......	......	1	......	......	......
Woodbine Av	1	......	......	......	......	......	......	......
Wells	2	......	......	......	......	......	......	......
Walmer Road	......	......	1	......	......	......	......	......
Wright Av	2	......	......	......	......	......	......	......
Withrow Av	1	......	......	1	......	......	......	......
Woodlawn Av	1	......	......	......	......	......	......	......
Wood	2	......	......	......	......	......	......	......
Woolsley	3	......	......	......	......	......	......	......
Water	2	......	......	......	......	......	......	......
Wellington Av	......	......	......	......	1	......	......	......
Walton	1	......	......	......	......	......	......	......
Water	......	......	......	1	......	......	......	......
Wallace Av	1	......	......	......	......	......	......	......
Yorkville Av	7	......	......	......	......	......	......	......

HOUSE SERVICES LAID DURING 1900.—*Continued.*

Name of Street.	Size of Service.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Yonge	5	1	......	1	......	......	......	1
York	.....	......	1	......	......	......	......	......
Totals	421	137	43	53	17	......	6	5
SERVICES LAID ON ISLAND:								
Cherokee Av	2	......	......	......	......	......	......	......
Hooper Av	1	......	......	......	......	......	......	......
Lakeshore Av	3	......	......	......	.....	....	......	......

SCHEDULE No. 15.

STATEMENT OF HOUSE SERVICES IN USE TO 31ST DECEMBER, 1900.

Total number of services in use previous to 1874	1,375
" " " laid during 1874	552
Number of new " " 1875	842
" renewed services laid during 1875	24
" new " " 1876 by permit	141
" renewed " " 1876	12
" new " laid by Commission 1876	602
" renewed " " " 1876	258
" new " " " 1877	1,006
" renewed " " " 1877	161
" new " laid by Corporation 1878	2,189
" renewed " " " 1878	103
" new " " " 1879	1,861
" renewed " " " 1879	97
" new " " " 1880	1,014
" renewed " " " 1880	41
" new " " " 1881	2,654
" renewed " " " 1881	117
" new " " " 1882	1,826
" renewed " " " 1882	44
" new " " " 1883	1,766
" renewed " " " 1883	54
" new " " " 1884	2,087
" renewed " " " 1884	12
" new " " " 1885	2,344
" renewed " " " 1885	22
" new " " " 1886	2,936
" renewed " " " 1886	19
" new " " " 1887	3,250
" renewed " " " 1887	65
" new " " " 1888	2,990
" renewed " " " 1888	65
" new " " " 1889	3,288
" renewed " " " 1889	68
" new " " " 1890	2,136
" renewed " " " 1890	55
" new " " " 1891	2,058
" renewed " " " 1891	53
" new " " " 1892	1,151
" renewed " " " 1892	49
" new " " " 1893	526
" renewed " " " 1893	2
" new " " " 1894	390

Number of	renewed	services	laid by	Corporation	1894	11
“	new	“	“	“	1895	319
“	renewed	“	“	“	1895	38
“	new	“	“	“	1896	291
“	renewed	“	“	“	1896	45
“	new	“	“	“	1897	474
“	renewed	“	“	“	1897	29
“	new	“	“	“	1898	504
“	renewed	“	“	“	1898	32
“	new	“	“	“	1899	664
“	renewed	“	“	“	1899	35
“	new	“	“	“	1900	683
“	renewed	“	“	“	1900	26
New services in	Yorkville	at time of		annexation		448
“ “	Parkdale	“		“		885
Total number services laid on Island						262

SCHEDULE 16.

NUMBER AND SIZE OF SERVICES IN USE TO DECEMBER 31ST, 1900.

	¼-in.	⅜-in.	½-in.	⅝-in.	¾-in.	1-in.	1½-in.	2-in.	2½-in.	3-in.	4-in.	6-in.	Total.
Services laid previous to 1875*	......	......	......	......	......	......	......	......	......	......	......	......	1,927
New services laid, 1875	......	......	617	194	38	7	4	5	......	1	......	......	866
" " 1876	......	......	900	80	11	8	1	4	1	8	......	......	1,013
" " 1877	......	......	1,083	43	9	8	......	10	......	14	......	......	1,167
" " 1878	86	1,427	717	28	5	9	......	5	......	14	1	......	2,292
" " 1879	......	1,248	633	47	9	5	......	4	......	12	......	......	1,958
" " 1880	......	607	385	26	7	3	......	8	......	19	......	......	1,055
" " 1881	......	1,375	1,275	62	17	17	......	7	......	17	1	......	2,771
" " 1882	......	625	1,139	44	23	20	......	5	......	14	......	......	1,870
" " 1883	......	373	1,311	70	16	13	......	17	......	17	3	......	1,820
" " 1884	......	441	1,513	70	18	25	......	9	......	20	2	......	2,099
" " 1885	......	190	2,068	56	26	13	......	7	......	5	......	1	2,366
" " 1886	......	14	2,741	92	37	29	....	9	......	25	......	8	2,955
" " 1887	......	10	3,062	106	55	38	......	15	......	25	......	4	3,315
" " 1888	......	......	2,856	101	32	22	......	19	......	14	7	4	3,055
" " 1889	......	......	3,087	127	52	45	......	19	......	1	24	1	3,356
" " 1890	......	......	1,995	83	37	35	......	16	......	......	24	1	2,191
" " 1891	......	......	1,995	33	34	24	......	11	......	......	13	1	2,111
" " 1892	......	......	1,109	26	23	23	......	7	......	......	12	......	1,200
" " 1893	......	......	465	18	13	15	......	8	......	......	8	1	528
" " 1894	......	......	332	29	15	17	......	3	......	......	4	1	401
" " 1895	......	......	270	26	25	17	......	11	......	......	7	1	357
" " 1896	......	......	359	20	22	20	......	13	......	......	1	1	336
" " 1897	......	......	390	34	17	36	......	16	......	......	5	5	503
" " 1898	......	......	378	60	45	27	......	12	......	1	6	7	536
" " 1899	......	......	430	123	70	23	......	26	......	1	15	11	699
" " 1900	......	......	421	137	43	53	......	17	......	......	6	5	682
Totals	86	6,310	31,529	1,735	694	552	5	283	1	208	189	42	43,429
Total number services on Island													262
Laid by Yorkville previous to annexation													448
" Parkdale " "													885
Total number of services													45,024

SCHEDULE No. 17.

METERS TAKEN OFF AND REPLACED DURING 1900

Month.	⅜-inch.		½-inch.		⅝-inch.		¾-inch.		1-inch.		1½-inch.		2-inch.		3-inch.		4-inch.		5-inch.		6-inch.		Total.
	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	
January	1	....	....	....	10	13	4	6	5	7	1	1	2	....	2	3	....	....	....	....	....	....	55
February	....	....	....	....	6	4	3	2	3	3	1	1	5	3	1	....	1	1	....	....	....	....	34
March	....	....	....	....	11	7	10	6	7	6	....	....	2	2	....	....	1	....	....	....	....	....	52
April	....	....	....	....	10	8	6	3	3	4	....	....	1	1	....	....	....	....	....	....	....	....	36
May	....	....	3	....	2	2	2	1	2	1	....	....	....	1	....	1	....	....	....	....	....	....	15
June	....	..	....	1	9	9	5	4	2	2	....	....	....	....	1	1	....	1	1	....	....	....	36
July	....	....	....	....	9	5	4	2	2	4	....	....	....	2	1	1	1	....	1	....	....	....	32
August	....	....	1	1	14	8	2	5	1	5	....	....	....	1	2	1	....	....	....	....	....	....	41
September	....	....	....	....	11	8	4	3	2	....	....	....	2	1	2	2	....	....	....	1	....	....	36
October	....	....	....	....	15	15	5	5	2	3	....	....	2	1	1	1	....	....	....	....	....	....	50
November	....	....	....	....	5	5	4	2	3	2	....	1	1	....	....	1	1	1	....	....	....	....	26
December	....	....	....	....	22	18	6	2	1	2	....	....	1	....	....	....	1	1	....	....	1	....	55
Totals	1	....	4	2	124	102	55	41	33	39	2	3	16	12	10	11	5	4	2	1	1	....	468

SCHEDULE No. 18.

METERS REPAIRED WITHOUT REMOVAL FROM SERVICES DURING 1900.

Month.	½-inch.	⅝-inch.	¾-inch.	1-inch.	1½-inch.	2-inch.	3-inch.	4-inch.	6-inch.	8-inch.	10-inch.	Totals.	New Boxes.	New Frames.	Frames and boxes repaired.
January	..	4	9	15	2	8	8	....	1	..	..	47	5	2	2
February	1	9	9	7	1	5	4	1	....	..	..	37	3	....	......
March	2	1	6	10	1	9	5	4	2	..	..	40	2	....	......
April	2	6	7	14	....	7	7	....	3	..	..	46	7	6	7
May	..	3	6	18	....	6	7	1	4	..	..	45	14	4	5
June	..	9	10	11	....	7	7	....	4	..	..	48	12	1	3
July	..	4	10	11	3	4	4	1	3	..	..	40	13	2	6
August	..	4	3	20	....	8	9	5	8	1	1	59	5	2	7
September	..	8	6	3	2	4	3	1	2	1	..	30	3	1	2
October	1	6	10	11	2	10	4	4	3	..	..	51	6	1	3
November	..	3	7	16	....	9	6	7	8	..	..	56	8	2	3
December	..	8	8	13	4	10	10	4	8	..	..	65	3	2	......
Totals	6	65	91	149	15	87	74	28	46	2	1	564	81	23	38

SCHEDULE No. 19.

SIZE AND NUMBER OF NEW METERS PLACED DURING 1900.

½-inch.	⅝-inch.	¾-inch.	1-inch.	1½-inch.	2-inch.	3-inch.	4-inch.	6-inch.	Total.
2	18	9	16	2	6	7	6	2	68

SCHEDULE No. 20.

RETURN OF TEMPERATURE OF WATER FOR YEAR 1900, TAKEN AT SHORE CRIB AND CITY HALL TAP.

Month.	Degrees Farenheit.					
	Shore Crib.			City Hall Tap.		
	Highest.	Lowest.	Average.	Highest.	Lowest.	Average.
January	39	33	36.3	41	37	39.0
February	37	34	35.3	42	36	37.7
March	36	33	33.9	38	35	36.3
April	40	35	36.6	42	37	39.0
May	45	37	40.4	50	41	43.5
June	48	40	43.3	50	43	46.4
July	52	40	43.8	54	45	47.7
August	68	44	56.3	67	48	58.5
September	66	42	53.1	67	46	54.0
October	61	41	54.6	61	45	56.8
November	54	39	44.7	57	42	47.1
December	42	36	38.3	44	39	41.4
Averages of year	49	37.8	42.9	51	41.1	45.6

ANALYSIS OF TEMPERATURE.

Shore Crib.

The highest, on August 24th, 68 deg.; the lowest, on March 6th, 33 deg.; the highest average, in August, 56.3 deg.; the lowest average, in March, 33.9 deg.

City Hall Tap.

The highest, on August 24th, 67 deg.; the lowest, on March 2nd, 35 deg.; the highest average, in August., 58.5 deg.; the lowest average in March, 36.3 deg.

SCHEDULE No. 21.

WORK DONE BY CONSTRUCTION AND REPAIRS DEPARTMENT, 1900.

	House Services.								Services Cut Out.					Leaks on Mains.									Services Moved to Suit Sidewalks.
	Leaks.	Burst Inside.	False Reports.	Blown Out.	Dug Out.	Cleaned Out.	Turned On.	Turned Off.	⅜-inch.	½-inch.	⅝-inch.	¾-inch.	1-inch.	4-inch.	6-inch.	8-inch.	10-inch.	12-inch.	20-inch.	24-inch.	30-inch.	36-inch.	
January	182	32	8	20	205	17	12	61	....	....	..	..	.	1	1	1	..	13	..	1	..	1	....
February	140	40	15	25	241	37	15	88	....	....	..	..	..	..	2	..	..	2	..	..	..	..	.....
March	178	44	16	18	250	108	26	132	...	....	..	..	..	..	1	..	..	...	..	..	..	.	......
April	161	31	16	16	205	66	30	77	2	3	.	..	..	..	2	1	..	7	..	..	..	1	13
May	184	36	22	15	219	14	45	58	1	3	..	..	1	1	11	..	..	11	..	..	..	1	155
June	172	28	12	20	300	30	35	34	1	1	..	..	..	1	6	..	..	3	1	..	..	1	273
July	195	26	15	13	287	7	10	35	....	1	..	1	..	..	13	..	.	7	.	3	..	..	279
August	185	21	23	46	255	13	5	17	1	...	..	1	2	..	5	..	..	7	..	..	..	..	87
September	146	24	12	36	138	5	13	25	1	2	..	1	..	..	6	1	..	14	..	1	..	2	354
October	123	24	9	20	313	9	21	59	8	12	..	3	..	.	10	..	..	12	..	..	..	..	282
November	171	33	11	20	215	9	6	82	....	3		.	2	..	1	..	..	4	..	..	..	..	315
December	178	33	7	13	139	5	8	52	....	1	..	1	..	.	9	..	..	8	..	..	..	.	118
Total	2,015	372	166	262	2,767	320	226	720	14	26	..	7	5	3	67	3	..	88	1	5	..	6	1,876

ACCOUNTANT'S STATEMENT.

CITY ENGINEER'S OFFICE,
December 30th, 1900.

C. H. RUST, ESQ.,
City Engineer.

DEAR SIR,—I attach herewith a statement of expenditure for the year ending December 31st, 1900, shewing details of contract work, material and labour on General, Special and Local Improvement Work, also statement of expenditure of the Water Works Branch, with details of same to December 31st, 1900, all of which is respectfully submitted.

Yours truly,
WM. McCARTNEY,
Accountant.

For Abstract of Charges See Page	ACCOUNTS.	$	c.	$	c.	$	c.
	GENERAL WORKS.						
96	Asphalt cleaning	17,087	07				
94	Bridges, repairs and maintenance..	8,798	23				
96	Culvert cleaning	5,374	00				
96	Engineering and expenses........	25,039	14				
97	General purpose	19,019	46				
101	Roadways	32,029	43				
104	Sidewalks	13,783	90				
105	Snow cleaning off sidewalks	7,917	72				
105	Street cleaning	51,546	61				
106	Scavenging	71,664	91				
106	Street watering	23,240	49				
107	Stone and wood crossings	1,805	44				
108	" " kerbs	540	29				
108	Private drains	13,807	24				
				291,653	93		
	Less am't paid Treas. for p'te drains	....		13,328	04		
	SPECIAL WORKS.			278,325	89		
109	Ashbridge's Bay Ditch	8	56				
109	Cribbing Block "D"............	11,279	25				
109	Dowling Ave. sewer	396	13				
109	Don improvement roadway	241	72				
109	Dredging slips	8,385	20				
109	Dundas St. Bridge, track repairs..	319	11				
110	Flushing asphalt pavements......	907	46				
110	Howland Ave. sewer	714	93				
110	Level crossings	4,496	79				
110	Lever Bros., agreement	12,699	62				
112	Moving Elliott & Neelon plant ..	486	35				
112	" sheds Western yard......	154	17				
112	Piling at Don River, Queen St....	1,477	20				
112	" Keating's Channel	714	85				
112	Queen St. east culvert	320	51				
112	Relaying stone sett roadways	1,014	69				
112	" sidewalk s.s. King St....	530	16				
112	Rosedale Ravine drive	481	08				
113	Rentals	1,015	00				
113	Reconstruction of track allowance.	62,144	89				
115	Sand pump	5,271	63				
116	Sewage disposal	640	30				
116	Stone, House of Industry........	162	24				
116	Street Railway matters	1,115	32				
116	Sidewalk, King St., opp. Stanley P'k	262	26				
117	Street numbering	132	54				
117	Steam road roller "	2,550	00				
117	Track repairs	11,148	49				
117	Weed cutting	513	70				
		129,584	15				
117	*Deduct* amount paid by G. T. R. for Station Street asphalt	5,000	00				
				124,584	15		
						402,910	04
	Carried forward	....		....		402,910	04

For Abstract of Charges See Page	ACCOUNTS.	$ c.	$ c.	$ c.
	Brought forward			402,910 04
	BRIDGES, GRADINGS, OPENINGS, ETC.			
118	Eastern Ave. Bridge	5,120 19		
118	Humber River Bridge	4,958 37		
118	Queen St. Bridge	47,384 93		
119	Noble Street extension	4,064 00		
				61,527 49
117	Railway pavements			3,080 71
	Local Improvement Works:			
120	Sewers		7,171 49	
121	Asphalt pavements	241,735 43		
129	Brick "	64,103 12		
133	Cedar block "	77,833 59		
140	Gravel	1,273 72		
140	Macadam	54,273 72		
140	Cobble stone	756 15		
146	Tamarac	197 98		
			440,173 71	
147	Brick sidewalks	472 92		
147	Concrete "	67,632 88		
149	Wooden "	45,167 34		
			113,273 14	
				560,618 34
	Personal and departmental acc'ts.			37,665 78
				1,065,802 36

DETAILS.	$ c.	$ c.	$ c.
BRIDGES, REPAIRS, ETC.			
Glen Road Bridge.			
5,500 lbs. castings, $137.50 ; 24 drain pipes, $30	167 50		
432 machine bolts, $25.92 ; 542 lbs. washers, $5.23 ; files, $1.11	32 26		
27 beams, $717.44 ; 1,226 ft. oak, $19.97 ; 64,688 ft. lumber, $1,002.03	1,739 44		
Coal oil, machine oil, wick, turps, etc	7 20		
Screws and nails, $38.97 ; sundry tools, 82c.	39 79		
Teaming, $9 75 ; blacksmithing, $45	54 75		
209 lbs. sheet lead	14 63		
Labor	107 83		
		2,163 40	
Cherry Street.			
15 piles, $66 ; 4,760 ft. lumber, $88.17 ; 2 wheels, $30	184 17		
11½ toise stone, $126.50 ; sundry tools, $4.65	131 15		
Oils, 90c. ; 2 gears, $4.76 ; 600 lbs. nails, $14.30	19 96		
9 lbs. steel, $1.35 ; 20 lbs. rope, $3 ; blacksmithing, $42.28	46 63		
Labor	1,090 39		
		1,472 30	
York Street.			
Boiled oil, turps, putty, etc	8 95		
Hammers, brushes and sundry tools	5 40		
Labor	54 94		
		69 29	
Lamb's Draw Bridge.			
466 ft. lumber, $8.69; 4 kegs nails, $14.15; oils, 60c.	23 44		
Blacksmithing, $1.20 ; labor, $127,16	128 36		
		151 80	
Gerrard Street.			
10,750 ft. lumber, $212.44 ; 800 lbs. nails, $31.40	243 84		
1 jack screw, $10 ; sundry tools, $12	22 00		
¼ cord cedar blocks, $1.35 ; 20 bbls. cement, $60.27 ; 20 yds. sand, $15.80	77 42		
Coal oil and wick	2 17		
Blacksmithing, $5.38 ; labor, $457.48	462 86		
		808 29	
Carried forward	....	4,665 08	....

	$ c.	$ c.	$ c.
Brought forward	....	4,665 08	....
Winchester Street.			
7,531 ft. lumber, $461.89; 4 kegs nails, $14; cartage, $5	480 89		
Bolts, $27.50; sundry tools, $4.72	32 22		
Labor	317 60		
		830 71	
Danforth Avenue.			
6,395 ft. lumber	126 82		
Labor	130 61		
		257 43	
Strachan Avenue.			
4 kegs nails, $14.10; 851 ft. lumber, $25.62	39 72		
Sundry tools	2 20		
Labor	200 30		
		242 22	
Castle Frank.			
1,275 ft. lumber	31 82		
Labor	60 84		
		92 66	
Dupont Street Culvert.			
720 ft. lumber	13 46		
Labor	8 66		
		22 12	
Island Park Bridge.			
9,005 ft. lumber, $199.64; 200 lbs. nails, $7.50	207 14		
Ferry Fares	38 45		
Labor	195 70		
		436 29	
Dundas Street.			
Labor	4 76		
		4 76	
Crawford Street.			
16,859 ft. lumber, $322.22; 700 lbs. nails, $25.40	347 62		
500 laths	3 75		
Labor	143 33		
		494 70	
Queen Street.			
Electric light	....	16 06	
Carried forward	....	7,062 03	....

	$ c.	$ $.	$ c.
Bronght forward	....	7,062 03	....
Humber River Bridge.			
Labor	....	1 12	
Shaw Street.			
49,260 ft. lumber, $1,044.01 ; 1,600 lbs. nails, $62.30	1,106 31		
Sundry tools	8 13		
Labor	595 73		
		1,710 17	
Huntley Street.			
Labor	....	6 13	
Bridge Tools.			
Sundry tools		66 48	
		8,845 93	
Less amount of labor charged lake shore road culvert	29 70		
Less amount of labor charged to Eastern Avenue Bridge	18 00		
		47 70	
CULVERT CLEANING.			8,798 23
2,519 ft. lumber, $40.52 ; 125 lbs. nails, $2 73	43 25		
704 ft. kerb, $9.50 ; cedar posts, 78c.	10 28		
Bolts and rivets	3 30		
Labor	5,317 17		
		5,374 00	
ASPHALT CLEANING.			
110 ft. lumber, $6.14 ; 50 lbs. nails, $5 ; bolts and rivets, $5.12	16 26		
895 lbs. iron, $29.26 ; 885 lbs. brass fibre, $185.85	215 11		
8 pr. wheels, $34 ; 18 galv. iron tubs, $81	115 00		
17¾ doz. garments, $159 ; duck caps, $36	195 00		
12 pieces sheet steel, $30 ; 4 sets axles, $13	43 00		
50 lbs. vermillion, $10 ; sundry material, $8.98	18 98		
Labor	16,483 72		
		17,087 07	
ENGINEERING AND EXPENSES.			22,461 07
Books and subscriptions, $136.41 ; blank books, etc., $24.11	160 52		
Hack hire, $163 ; horse keep, $494.23	657 23		
Postage stamps and cards, $225 ; mounting maps, $3	228 00		
Carried forward	1,045 75	....	31,259 30

	$ c.	$ c.	$ c.
Brought forward	1,045 75		31,259 30
Rent of 'phone, $37.50 ; messages, $17.38	54 88		
Drawer locks, etc., $10.27 ; rubber stamps, $5.75	16 02		
Petty cash, $20 ; sundry office fittings, $10.90	30 90		
Draughting materials, $4.25 ; typewriting supplies, $69.05	73 30		
Lithographing, $322 ; photos, $125.20	447 20		
Printing, $20 ; changing and altering signs, $1.75	21 75		
Installing electric bells, $18.85 ; rubber matting, $4.88	23 73		
Harness fittings	1 75		
Travelling expenses	144 45		
Advice *re* Municipal lighting, Alex. Dow	75 00		
Car tickets	375 00		
Labor	22,729 41		
			25,039 14
GENERAL PURPOSE.			
Sewer Repairs.			
5,950 ft. lumber, $120.67 ; 112 lbs. nails, $4.10	124 77		
52½ bbls. cement, $141.92 ; 6,825 bricks, $52.07 ; 23½ bbls. sand, $16.69	210 68		
328 ft. pipe, $72.28 ; manhole covers, steps, etc., $11.81	84 09		
Globes, wick, oil, etc.	27 36		
Boiled oil, turps, etc.	15 83		
Turning patterns	123 68		
Board of horse	182 00		
Rentals	139 00		
Hinges, screws, rope, etc.	17 46		
Hire of engine and pile-driver, $22.84 ; rent of 'phones, $45	67 84		
6 yds. gravel, $4.80 ; 55 lbs. gaskets, $13.75 ; 6 pr. rubber boots, $27.40	45 95		
6 pr. hose couplings, $15 ; rent of bicycle, $8	23 00		
Extra dredging, Dupont Street sewer	6 00		
Labor and material, Queen Street bridge	59 41		
Labor	3,363 05		
	4,490 12		
Less amount paid Treasurer	335 77		
		4,154 35	
Cleaning and Flushing.			
7 pr. rubber boots, $26.32 ; 500 ft. hose, $525 ; washers, 38c.	551 70		
200 ft. lumber, $3.50 ; 509 lbs. castings, $10.18	13 68		
Carried forward	565 38	4,154 35	56,298 44

	$ c.	$ c.	$ c.
Brought forward	565 38	4,154 35	56,298 44
Repairing syphons, $20; sundry tools, $11.30	31 30		
Board of horse	31 00		
119 lbs. rope, $17.85; patterns, $5.75	23 60		
Labor	2,947 60		
		3,598 88	
Public Lavatory.			
925 ft. pipe, $18.58; 1 pr. spring hinges, $5.75	24 33		
Whisks, brooms, dust-pans, etc	2 85		
Repairs	21 80		
Disinfecting fluids, etc	10 85		
Paint, polish, etc	6 09		
Labor	315 00		
		380 92	
Manholes and Culverts.			
Manhole steps, covers, tops, etc	78 43		
5,485 lbs. castings, $144.80; bends and junctions, $8.50	153 30		
1,439 ft. pipe, $149.08; 6-ft. culvert connection pipe, $1.14	150 22		
177 bbls. cement, $504.44; 56¼ yds. sand, $40.64	545 08		
1,756 ft. lumber, $25.38; 20 yds. gravel, $16.06	41 44		
Lanterns, pails, globes, etc	14 06		
39,350 bricks, $309.69; board of horse, $30	339 69		
Sundry tools, $11.28; coal oil, wick, etc., $8.94	20 22		
Patterns, $8.40; blacksmithing, $8.40	16 80		
Labor	1,823 97		
	3,183 21		
Less amount of material returned to stores	107 00		
		3,076 21	
Tools and Miscellaneous.			
Repairs to tools, $30.45; horse feed and straw, $12.29	42 74		
Rent of 'phones, $19.98; photo supplies, $23.70	43 68		
Blue print paper, etc., $149.85; mounting maps, $61.05	210 90		
8 gals. varnish, $17.13; shellac, putty and turps, $12.52	29 65		
3 doz. card holders, $27; blue print frames, $131.93	158 93		
704 ft. moulding, $29.74; mould hooks, etc., $3.65	33 39		
Carried forward	519 29	11,210 36	56,298 44

	$	c.	$	c.	$	c.
Brought forward	519	29	11,210	36	56,298	44
2,937 ft. lumber, $107.18; 50 ft. flooring, $1.10; 410 lbs. nails, $11.55	119	83				
2 oak cabinets, $120; 22 ft. office blind webs, $13.20	133	20				
Lettering vaults, etc., $41; lithographing, $143.50	184	50				
Brass fittings, $58; 755 lbs. castings, $15.10	73	10				
Car tickets, $75; board of horse, $122.38	197	38				
Chesterman tapes, $28.85; printing plans, $10	38	85				
Screws, hooks, hinges, etc	19	24				
4 pans, $12.25; 1 mixing board, $45; pulley block, $16	73	25				
Sundry office fittings, $25.93; printing, $453.30	479	23				
Framing photos, $9.55; process paper, etc., $86.60	96	15				
Photos	91	90				
7½ bbls. cement, $20.74; cement gripes, $12.50; material for cement testing, $6.18	39	42				
Analysis of cement, $70; Dressing stone, $39	109	00				
54 ft. 9-in. pipe, $8.10; 450 ft. hose, $52.50; hose couplings, 75 cts	61	35				
6,825 lbs. Grey lime	22	63				
Hack hire, $15.50; hire of bicycle, $16.00	31	50				
1,500 bricks, $11.88; sand, $16.88; customs charges, $4.40	33	16				
Rent of land for sewer, J. R. Wood	15	00				
Deep sea line and splicing, $9.96; boat hire, $18.75	28	71				
Repairs to tapes and stamps, $31.45; moving 'phone, $4.60	86	05				
Hire of horse and buggy for Paymaster, $32.50; harness fittings, $45.71	78	21				
13 doz. crayons, $13.45; cardboard, $13.80; stamps, $12.35	39	60				
Sundry hardware, $15.52; glass, $31.74	47	26				
3 doz. sash lifts, $11.25; white lead, paint, etc., $11.05	22	30				
Coal oil, soap and sundry material	16	09				
Hose, nozzles and couplings, $11.27; 4 iron barrows, $11	22	27				
Doors, locks, knobs, etc., $30.94; sundry hardware, $12.98	43	92				
Culvert traps and castings, $15.79; brushes, brooms, etc., $5.60	21	39				
1 gas tap, $6.50; pails, $1.50; 200 ft. rope, $3.73	11	73				
Typewriting ribbons	3	00				
Carried forward	2,708	51	11,210	36	56,298	44

		$ c.	$ c.	$ c.
Brought forward		2,708 51	11,210 36	56,298 44
Towing dredge, $6; ventilators for dark room, $3.15		9 15		
Sundry office fittings, $13.40; hauling earth, $25		38 40		
Labor		3,522 21		
		6,278 27		
Cr.				
Amount paid Treasurer —				
Scrap	121 00			
Moving drain	3 64			
T. Eaton's sewer	75 00			
		199 64		
			6,078 63	
Areas.				
1 rule		35		
Labor		637 44		
			637 79	
Lee Avenue Grading.				
Labor and material			5 13	
Lake Shore Road Culvert.				
Board of horse		30 00		
Labor		41 32		
			71 32	
St. Lawrence Market Improvement.				
I special drill		40 00		
Inspection		708 00		
			748 00	
Eastern Yard Stables.				
6,319 ft. of 2-in. plank, $93.83; 971 ft. 4 x 4 scantling, $13.82		107 65		
3,000 ft. of 1-in. plank, $42.60; 1,624 ft. curb, $21.92		64 52		
350 lbs. nails		12 08		
Labor		170 98		
			355 23	
			19,106 46	
Cr.				
Amount paid Treasurer by J. Williams and B. Westwood			87 00	
				19,019 46
Carried forward				75,317 90

		$ c.	$ c.	$ c.
Brought forward				75,317 90
ROADWAYS.				
Macadam.				
4,110 ft. lumber, $59.45; 105 lbs. nails, $3.03; 1,000 bricks, $7.50		69 98		
64$\frac{1485}{2000}$ tons coal, $332.69; 137.26 toise macadam, $1,580.98		1,913 67		
5,406½ lbs. castings, $216.15; 13 toise stone, $141.63		357 78		
1 steam guage, $7.25; 4 chain wheels, $7.70; bends, $6		20 95		
460 ft. curb, $19.11; 3 cords cedar blocks, $16 20		35 31		
Roller parts, $50.15; wagon parts, $13		63 15		
12 yds. sand, $9.48; 515 yds. gravel, $489.23		498 71		
486 lbs. iron, $12.22; bolts, etc., $8.51; 117 lbs. steel, $6.35		27 08		
Oils, $72.14; paint, varnish, etc., $14.20.		86 34		
Sprocket attachments, $26.32; repairs, $4.75		31 07		
236 lbs. zinc, $16.52; 6 bbls. cement, $17.39; 75 lbs. waste, $7.89		41 80		
Boilermaker's time, $19.75; blacksmith's time, $12.69		32 44		
Coal oil, globes, wick, etc		12 04		
Harness, $23.63; veterinary services, $7; drugs, $1.43		32 06		
Shafts for 4-in. crusher, $49.50; sundry fittings, $14.92		64 42		
Horse feed and straw		300 00		
Freight on stone, $4.86; sodding, $3.24; packing, $5.61		13 71		
Travelling expenses		11 40		
Sundry material		7 95		
1 set wheels		9 25		
Labor		5,873 93		
		9,503 04		
Cr.				
Use of roller, $1,125.12; 116 yds. granite, $48	1,173 12			
Amount paid Treasurer	386 46			
		1,559 58		
			7,943 46	
Cedar Block.				
92½ cd. cedar blocks, $701.35; 12 cd. cedar posts, $64.80		766 15		
149 yds. gravel, $117.99; 1,206 ft. lumber, $18.79; nails, $1		137 78		
Carried forward		903 93	7,943 46	75,317 90

	$	c.	$	c.	$	s.
Brought forward	903	93	7,943	46	75,317	90
$17\frac{1088}{2000}$ t. coal, $97.33 ; $\frac{1}{2}$ cd. wood, $2.50.	99	83				
15 lbs. rope, $2.25 ; 100 lights glass, $5.50 ; 15 files, $2.40	10	15				
Power at City stables, $10.93 ; veterinary services, $27	37	93				
Rent of Parkdale siding	28	71				
Sundry material	4	48				
Labor	2,725	50				
	3,810	53				
Cr.						
Amt. paid Treasurer for sundries	134	68				
			3,675	85		
Stone and Cobble.						
60 yds. gravel, $50.80 ; 3,000 granite setts, $15	65	80				
Proportion of tar kettle	100	00				
Drugs, $5.67 ; coal oil, 60c.	6	27				
Labor	546	27				
	718	34				
Less am't paid Treasurer for stone setts	82	60				
			635	74		
Tools and Miscellaneous.						
Rent of 'phones, $41.50 ; repairing tools, $22.34	63	84				
3 asphalt rolls, $10.50 ; boiler covering, $8.15	18	65				
$8\frac{385}{2000}$ tons coal, $42.46 ; 497 ft. lumber, $10.57 ; lumber pencils, $5.40	58	43				
1,400 ft. tape, $25.20 ; 100 ft. hose, $14 ; rope, $1.38	40	58				
1 bay gelding, $120 ; harness fittings, $4.25	124	25				
2 cord wood, $13 ; steel, $17.78	30	78				
4 steel knives, $4.50 ; 4 rakes, $2.55 ; 14 brooms, $7	14	05				
6 gr. nails, $2.10 ; 50 lbs. w. lead, $3.75 ; handles, etc., $6.15	12	00				
1 granite cutter, $1.25 ; 13 wheel-barrow wheels, $11	12	25				
Bolts, trowels, etc	8	65				
10 metallic shingles, $42.50 ; 39 lbs. leather, $13.26	55	76				
15 length of stove pipe, $2.10 ; hose couplings, $2.65	4	75				
Ferry tickets	5	00				
Carried forward	448	99	12,255	05	75,317	90

	$ c.	$ c.	$ c.
Brought forward	448 99	12,255 05	75,317 90
Coal oil and sundry material	5 33		
Labor	455 45		
	909 77		
Less amount paid Treasurer for constructing buggy	70 00		
		839 77	
General Repairs.			
Chipping glass, $13.80 ; installing electric bells, $17.60	31 40		
300 yds. gravel, $255 ; 625 scoria blocks, $34.37	289 37		
10,274 ft. lumber, $165.73 ; 317 lbs. nails, $7.28..........................	173 01		
224 ft. curb stone, $126.56 ; 2½ cord cedar posts, $11.25	137 81		
1,000 bricks, $7.75 ; 2½ bbls. cement, $7.18	14 93		
20 yds. sand, $11.31 ; $2\frac{330}{2000}$ tons coal, $10.71	22 02		
Repairs to asphalt......................	31 04		
Lanterns, red globes, etc.	3 10		
Labor	1,772 40		
	2,475 08		
Less amount paid Treasurer for material..	443 99		
		2,031 09	
Gravel.			
1,146 yds. gravel	1,292 38		
Rent of shed, Richmond Street..........	42 00		
Labor	520 86		
		1,855 24	
Asphalt Repairs.			
1 toise macadam, $12.26 ; 39 bbls. cement, $118.95..........................	131 21		
Coal oil, cans, etc......................	73		
Repairs to Bay Street..................	1,029 56		
" Queen and Yonge Streets.....	58 12		
" Yonge Street............	1,088 48		
" Adelaide and King Streets ..	183 01		
" Victoria Street	5 50		
" Bloor Street	541 06		
" Queen Street east............	309 73		
" Brunswick Avenue	6 89		
" King Street	217 69		
" Yonge, King and Queen Sts...	208 32		
" Sherbourne Street...........	603 22		
" Simcoe Street	19 05		
" Jarvis and Bloor Streets.....	111 00		
" Mincing Lane	5 13		
" Jarvis Street..............	380 18		
Carried forward	4,898 88	16,981 15	75,317 90

	$	c.	$	c.	$	c.
Brought forward	4,898	88	16,981	15	75,317	90
Repairs to King, Scott and Wellington Sts.	439	67				
" St. George Street............	429	16				
" Sundry pavements..........	6,620	56				
Labor	448	50				
			12,836	77		
Special Macadam.						
100¾ toise macadam..............	1,153	96				
162 yds. gravel........................	128	18				
Repairs to crusher	11	42				
2 tozzle seats	13	50				
Coal oil		40				
Labor	904	05				
			2,211	51		
					32,029	43
SIDEWALKS.						
148,562 ft. lumber, $2,182.99 ; 31½ bbls. cement, $94.19.......	2,277	18				
6,815 ft. concrete, $163.95 ; 351 ft. 6 in. stone curb, $107.37................	271	32				
7,979 ft. cedar curb, 107.72; ¼ toise macadam, $2.50	110	22				
Overtime on Sherbourne Street sidewalk..	10	00				
Horse feed and straw	300	00				
228 lbs. iron wire, $8.55 ; 6 sheets gate iron, $6.60	15	15				
1,856 lbs. castings, $38.20; 1 lawn mower, $8..............	46	20				
2 waterproof covers, $42 ; 33 yds. duck, $30	72	00				
Sundry tools..........................	12	99				
Rebate for curbing.......	7	50				
7,915 lbs. nails, $221.53 ; spikes, etc., $5.69	227	22				
Sundry brick walks, flankages, etc.	169	33				
3 books ferry tickets, $12.50 ; rent of 'phone, $45..........................	57	50				
Rent of shed on Richmond Street.......	49	00				
125 lbs. staples, $16.25 ; 14 file drawers, $20.40	36	65				
Refund to Canada Loan Co.............	20	00				
Cost of walk (York County Loan)...	816	49				
2,400 bricks	27	84				
Rent of Parkdale siding.	28	71				
$9\frac{780}{2000}$ toise coal, $47.04 ; 1 cord wood, $6	53	04				
1 side leather. $4 ; 2½ yds. belt dressing, $7.50	11	50				
12 lanterns, $6 ; 43 gallons coal oil, $8.60	14	60				
Treating lumber.....	36	00				
Repairs to tools, $2 ; stamp repairs, $2..	4	00				
Sundry material................	12	41				
Carried forward	4,686	85	....		107,347	33

	$ c.	$ c.	$ c.
Brought forward	4,686 85		107,347 33
36 saw files, $4.50 ; 24 grading lines, $4.80	9 30		
Labor	11,334 69		
	16,030 84		
Less amount paid treasurer	2,246 94		
			13,783 90
SNOW CLEANING, SIDEWALKS.			
8 document files	8 00		
12 Chesterman tapes	26 70		
½ cord wood	3 25		
532 lbs. rattan	111 71		
Sundry stationery	45 10		
Labor	7,722 96		
			7,917 72
STREET CLEANING.			
44 gals. engine oil, $15.32; 10 gals. turps., $8	23 32		
465 ft. lumber, $7.74 ; 325 lbs. nails, $10.44	18 18		
Leather goods, $11.10; covering buggy top, $6	17 10		
2½ cord wood, $16.15 ; 24$\frac{1855}{2000}$ tons coal, $112.73	128 88		
3,641 lbs. iron, $101.11; steel, $18.52	119 63		
144 balls thread, $11.52 ; 24½ lbs. rope, $3.68	15 20		
723 lbs. castings, $14.46 ; 95 lbs. babbitt, $15.90	30 36		
10 yds. sand, $7.90; coal oil, $7.32	15 22		
665 lbs. rattan, $125.05 ; 330 ft. maple wood, $13.70	138 75		
Lights at stables	74 83		
3,920 lbs. wire fibre	539 70		
Power at City stables	54 41		
Sundry hardware	23 46		
96 curry combs, $28.80; 84 dandy brushes, $42	70 80		
700 carriage bolts, $8.70; 1 vise, $19	27 70		
Horse feed and straw, $3,948.08 ; horses, $725	4,673 08		
12 special boxes, $7.20 ; 719 ft. white oak, $39.96	47 16		
Paint, shellac, varnish, etc	20 75		
518 lbs. brass	108 78		
305 lbs. zinc	8 40		
Veterinary services	60 25		
Rent of 'phone	97 00		
37 document files, $38.20 ; sundry hardware, $14.27	52 47		
Carried forward	6,365 43		129,048 95

	$ c.	$ c.	$ c.
Brought forward	1,365 43		129,048 95
45 ft. ½-in. cut oak, $3.15; sundry material, $14.53	17 68		
Snow cleaning, material, $10; labor, $14,284 04	14,294 04		
Labor	30,869 46		
			51.546 61
SCAVENGING.			
3½ cords wood, $14.35; $5\frac{480}{2000}$ tons coal, $24.33	38 68		
10,270 lbs. iron, $246.37; 257¾ lbs. steel, $19.68	266 05		
150 lbs. paint, $23.50; 100 lbs. white lead, $7.50	31 00		
100 lbs. red lead, $8.50; 20 gals. turps, $16.00	24 50		
10,254 ft. lumber, $381.37; nails, $16.85; screws, $6.86	405 08		
2 horses, $282.50; horse feed and straw, $5,741.33	6,023 83		
1 feed mill, $43.55; harness fittings, $9.37; horse rasps, $8.50	61 42		
72 dandy brushes, $25.20; horse nails, $9.97	35 17		
Veterinary services	57 25		
Power at City stables, $63.13; rent of 'phone, $70.00	133 13		
24 yds. webbing, $3.60; 107 yds. duck, $74.90	78 50		
Sundry hardware, $11.09; 63 gals. coal oil, $23.58	34 67		
3,350 carriage bolts, $44.83; 1 doz. sets of spokes, $36.00	80 83		
65 ft. of ¼-in. chain, $6.50; 45 lbs. rope, $6.75	13 25		
Fire upsetter	27 00		
Lamps, $5.25; lanterns, $1; pails, $4.20	10 45		
69 lbs. leather, $24.15; 2½ belt dressing, $7.50	31 65		
10 gals. boiled oil, $7.00; 5 gals. japan, $3.50; drop black, $1.80	12 30		
Sundry material, $19.02; repairs, $4.00	23 02		
Island scavenging: material, $81.36; labor, $382.17	463 53		
Labor	63,926 93		
	71,778 24		
Less am't paid by Parks Dept. for manure	113 33		
			71,664 91
STREET WATERING.			
70 lbs. brass	13 30		
Trimming buggy	10 50		
Carried forward	23 80		252,260 47

	$ c.	$ c.	$ c.
Brought forward	23 80		252,260 47
1,233 lbs. axle grease, $61.65 ; 48 curry combs, $14.40	76 05		
Horse feed and straw	3,203 03		
Power and light at City Stables	193 54		
318 lbs. nails, $29.86 ; 10,159 ft. lumber, $220.30	250 16		
Rent of 'phone, $25 ; inspecting scales, $2.67	27 67		
7,654 lbs. iron, $198.42 ; 209 lbs. steel, $7.73	206 15		
2½ cords wood, $10.15 ; 20$\frac{415}{2000}$ tons coal, $100.14	110 29		
599½ ft. hose, $280 ; washers, $4	284 00		
1 doz. horse blankets, $20 ; veterinary services, $127.50	147 50		
17 rasp hellers, $14.45 ; 108 horse brushes, $43.20	57 65		
Harness fittings, $55.11 ; 250 lbs. horse nails, $34.65	89 76		
33 gallons boiled oil, $22.93; Japan, turps, etc., $27.90	50 83		
20 files, $19 ; 6 brushes, $7.60 ; Sundry hardware, $9.75	36 35		
200 lbs. vermillion, $40; white lead, $3.75 ; coal oil, $1.40	45 15		
5 doz. expansion rings, $9 ; 16 platform springs, $94.38	103 38		
531¾ lbs. leather, $181.63 ; 1 spramotor, $6	187 63		
27 ferule couplings, $40.50 ; repairs, $12.75	53 25		
30 lbs. curled hair, $10.50 ; sheep skins, $3.05	13 55		
Repairs western stables, $15 ; plumbing, $3.50	18 50		
11 gross screws, $5.12 ; 1,617 carriage bolts, $28.12	33 24		
32 lbs. paint, $6.20 ; 3 bbls. white lime, $3.50	9 70		
Labor and material repairing meter	19 75		
1 2½-in. patent expander	10 00		
Sundry material	20 65		
Street sprinkling, Toronto Railway Co	3,736 28		
Labor	14,232 63		
			23,240 49
STONE AND WOOD CROSSINGS.			
32,500 ft. lumber, $417.68 ; 285 lbs. nails, $9.53	427 21		
10 yds. sand, $8.54 ; 58 yds. gravel, $46.26	54 80		
3 tons coal, $15.51 ; sundry material, $2.82	18 33		
5 bbls. cement, $13.69; 2.37 toise macadam, $23.67	37 36		
Carried forward	537 70		275,500 96

	$ c.	$ c.	$ c.
Brought forward	537 70		275,500 96
3½ cords cedar blocks, $17.55; 120 scoria blocks, $6.60	24 15		
3,800 bricks, $46.98; 745 lbs. spikes, $25.61	72 59		
Rent of yard, Richmond Street	21 00		
2 cords cedar posts	10 80		
Labor	1,139 20		
			1,805 44
STONE AND WOOD CURBS.			
7,145 ft. lumber, $103.71; 170 lbs. nails, $4.19	107 90		
1,559½ lbs. iron, $27.72; 325 lbs. spikes, $11.51	39 23		
6 sheets galvanized iron, $4.50; 50 ft. belting, $11.50	16 00		
1 bbl. cement, $2.87; carriage bolts, $2.42	5 29		
Drying 6,000 ft. of oak	12 00		
Sundry material	8 38		
Labor	380 03		
	568 83		
Less amount paid Treasurer	28 54		
			540 29
PRIVATE DRAINS.			
Repairs to pavements	182 03		
3,824 ft. lumber, $51.24; cartage, $6	57 24		
276 ft. of 12-in. pipe, $69; 20 ft. of 15-in. pipe, $4; 12-in. bend, $1	74 00		
1,097 ft. of 9-in. pipe, $164.59; 6 9-in. bends, $4.75	169 34		
15,438 ft. of 6-in pipe, $1,523.40; 48 6-in. bends, $22.35	1,545 75		
5 saws, $7.55; 4 wheelbarrows, $9.50; 6 pails, $6.	23 05		
103 bbls. cement, $283.65; ¾ toise macadam, $8.49	292 14		
1,800 bricks, $13.95; 129½ gals. coal oil, $33.34	47 29		
3 4-in. P. traps, $2.10; 29 6-in. P. traps, $49.50; 6 6-in. P. traps, $9; stoppers, $1.20	61 80		
10 lanterns, $8.10; red globes, $3.74; oil cans, $3.50	15 34		
Candles, wick and sundry material	8 24		
Car tickets	25 00		
Junctions, $9.25; sundries, $1.20	10 45		
Removing earth from drain	1 00		
Amount of refunds	548 35		
Connecting drain, Golden Avenue	18 59		
Excavating to find private drain, Sherbourne St.	10 00		
Carried forward	3,089 61		277,846 69

		$ c.	$ c.	$ c.
Brought forward		3,089 61		277,846 69
Sundry private drains		148 53		
Labor		10,569 10		
		13,807 24		
Less am't paid Treasurer for private drains		13,328 04		
				479 20
SPECIAL WORKS.				278,325 89
Ashbridge's Bay Ditch.				
2 pairs rubber boots			8 56	
Cribbing Block "D."				
Boat hire		13 10		
Contract		10,897 15		
Labor		369 00		
			11,279 25	
Dowling Avenue Sewer.				
20 bbls. cement, $47.95 ; 26 yds. gravel, $24.14		72 09		
258 ft. pipe, $47; junctions, $11.25; 2 culvert traps, $10		68 25		
400 ft. lumber, $4.80 ; manhole steps and tops, $11.92		16 72		
Sundry material		3 46		
Labor		301 90		
		462 42		
Less amount paid Treasurer for pipes and junctures	47 70			
Less amount paid Treasurer for constructing private drains	18 59			
		66 29		
			396 13	
Don Improvement Roadway.				
Trees		199 00		
Labor		42 72		
			241 72	
Dredging Slips.				
1 taffrail log, $12 ; boat hire, $2.50 ; sundries, $1.50		16 00		
Labor		658 90		
Contract		7,710 30		
			8,385 20	
Dundas Street Bridge Track Repairs.				
11,366 ft. lumber, $189.14 ; 700 lbs. nails, $27		216 14		
Carried forward		216 14	20,310 86	278,325 89

	$ c.	$ c.	$ c.
Brought forward	216 14	20,310 86	278,325 89
40 yds. sand, $28; 4 yds. gravel, $2.96...	30 96		
3 cords cedar blocks, $19.13; 5 bbls. cement, $10.15	29 28		
Sundry tools	2 54		
Coal oil, wick, red globes and lanterns ...	5 79		
1 ladder, $10; 3 steel brooms, $2.50	12 50		
Use of plant, Medlar & Arnott	16 50		
Blacksmithing	1 80		
Labor	3 60		
		319 11	
Flushing Asphalt Pavements.			
2 pairs rubber boots, $27.90; 200 ft. hose, $216	243 90		
Special couplings, $2; sundry material, $1.55	3 55		
Labor	660 01		
		907 46	
Howland Avenue Sewer.			
24,290 bricks, $182.39; 50¾ bbls. cement, $108.98	291 37		
21½ yds. sand, $13.81; sundry tools, $1.52	15 33		
Repairing syphon	8 25		
Labor	399 98		
		714 93	
LEVEL CROSSINGS.			22,252 36
Canadian Pacific Railway.			
Avenue Road	448 95		
Bathurst Street	290 28		
Dufferin Street	291 32		
		1,030 55	
Grand Trunk Railway.			
Pape Avenue	384 66		
Jones Avenue	385 25		
Logan Avenue	390 70		
Bloor Street	287 07		
Queen Street	96 96		
		1,544 64	
Dunn and Dowling Avenues	....	1,921 60	
			4,496 79
LEVER BROS.' AGREEMENT.			
Roadway to Cattle Buyers.			
17 bbls. cement, $50.32; 12½ toise macadam, 153.12	203 44		
3,032 cedar posts, $348.68; 992 ft. lumber, $14.78	363 46		
Carried forward	566 90	....	305,075 04

	$ c.	$ c.	$ c.
Brought forward	566 90	....	305,075 04
3,397 ft. pipe, $57.38 ; junctions, $2.25..	59 63		
112 yds. gravel, $89.60 ; freight, $36.....	125 60		
4 saws, $7.10 ; nails, 17c.; 75 ft. white oak, $4.02.	11 29		
Examining stone, $6 ; plough share and repairs, $8.96....................	14 96		
Labor................................	506 01		
		1,284 39	
Eastern Avenue Roadway, Don to G. T. R.			
9,875 bricks, $75.72 ; 859 yds. stone, 508.76	584 48		
9,753 cedar curb, $167.74 ; 12¾ cords wood, $83.99	251 73		
120.63 toise macadam, $1,558.02 ; 170 yds. gravel, $136......................	1,694 02		
10 yds. sand, $7.42 ; 4 bbls. cement, $10.36	17 78		
2,705 ft. lumber, $40.14 ; 100 lbs. nails, $3.45	43 59		
6 rolls tarred paper, $5.40 ; oils and grease, $6.96	12 36		
4 pipes, $20 ; 2,800 ft. weeping tiles, $77..	97 00		
54 ft. railroad iron, $28.10 ; spikes, $13.43	41 53		
Freight on stone..........................	472 32		
Rent of engine, $35.72 ; share of shaft, $25.20	60 92		
Use of roller.....	202 80		
Labor..............	2,114 43		
		5,592 96	
Eastern Avenue Sidewalk, Don to G. T. R.			
150 yds. gravel	120 00		
23,421 ft. lumber, $342.78 ; 450 lbs. nails, $15.53	358 31		
Labor...........	281 02		
		759 33	
E. S. Don Roadway, Queen to Eastern.			
4 yds. sand, $3.16 ; 936 yds. stone, $204.33	207 49		
240 yds. gravel, $192.00 ; 81¼ toise macadam, $1,063.51	1,255 51		
1,500 ft. weeping tile, $41.25 ; oils, $5.06 ; spikes, $3.60......................	49 91		
22,132 ft. lumber, $377.87 ; 450 lbs. nails, $15.53...............	393 40		
3¼ cords cedar posts, $16.25 ; 3 cords wood, $19.50............................	35 75		
Freight on stone	813 19		
Rent of engine, $24.28 ; share of shaft, $25.20............................	49 48		
Carried forward	2,804 73	7,636 68	305,075 04

	$ c.	$ c.	$ c.
Brought forward	2,804 73	7,636 68	305,075 04
Use of roller	130 80		
Labor	2,127 41		
		5,062 94	
			12,699 62
Moving Elliott and Neelon Plant.			
421 ft. of white oak	2 34		
Labor	484 01		
			486 35
Moving Sheds, Western Yard.			
Labor			154 17
Piling at Don River, Queen Street.			
Contract	1,433 56		
Labor	43 64		
			1,477 20
Piling Keating's Channel.			
Contract	633 85		
Labor	81 00		
			714 85
Queen Street East Culvert.			
1,814 ft. lumber, $31.93; 1,600 bricks, $120	151 93		
68 yds. sand, $55.96; 2 bbls. cement, $12.95	68 91		
60 ft. rope, $4.00; lanterns, globes, etc., $4.09	8 09		
Labor	91 58		
			320 51
Relaying Sidewalk s.s. King Street.			
¼ toise macadam, $3.19; 7 bbls. cement, $20.09	23 28		
Coal oil	2 00		
Labor	504 88		
			530 16
RELAYING STONE-SETT ROADWAYS.			
46 lbs. steel, $5.52; 4 yds. gravel, $3.20; coal oil, 60c.	9 32		
Share of tar kettle	50 00		
Labor	955 37		
			1,014 69
ROSEDALE RAVINE DRIVE.			
110 ft. fence	22 00		
Labor	459 08		
			481 08
Carried forward			322,953 67

	$ c	$ c.	$ c.
Brought forward			322,953 67
RENTALS.			
Western yard	300 00		
Hamilton's wharf	715 00		
			1,015 00
RECONSTRUCTION OF TRACK ALLOWANCE.			
Queen Street, Yonge to Bathurst.			
Contract		119 70	
King Street, Simcoe to Sherbourne.			
Asphalt repairs	1,200 00		
8¾ yds. sand, $6.49; 2 bbls. cement, $5.18	11 67		
Scoria blocks	650 00		
Hauling blocks	11 41		
	1,873 08		
Less amount of concrete returned	499 00		
		1,374 08	
King Street, Simcoe to Bathurst.			
Contract		43 59	
Yonge Street, Grenville to Bloor.			
Contract	806 91		
Less amount of concrete returned	242 00		
		564 91	
Queen Street, Bathurst to Niagara.			
Contract		689 75	
King Street, Simcoe to Spadina.			
Contract		700 36	
Queen Street, Gwynne to Roncesvalles.			
5½ cords cedar blocks, $29.70; 4 bbls. cement, $10.36	40 06		
Contract	7,758 74		
Labor	167 01		
		7,965 81	
Spadina Avenue, Knox College to Bloor.			
Contract	4,852 93		
Labor	141 50		
		4,994 43	
Carried forward		16,452 63	323,968 67

	$ c.	$ c.	$ c.
Brought forward	....	16,452 63	323,968 67
Queen Street, River to G. T. R.			
140 yds. gravel, $138.80 ; 733 yds. sand $209.09	347 89		
282 yds. stone, $451.60 ; 29 bbls. cement, $864.53	1,316 13		
400 ft. of 2-in. plank, $4.80 ; 6,000 scoria blocks, $336.48	341 28		
Pipe, $39.65 ; bends and junctions, $15.75	55 40		
1,000 bricks, $7.75 ; globes, lanterns, etc., $7.41	15 16		
1,890 lbs. castings, $37.80 ; 2 track gullies, $9	46 80		
Sharpening tools	5 70		
Labor	1,893 17		
		4,021 53	
College Street, Yonge to McCaul.			
Contract	8,077 49		
Labor	125 50		
	8,202 99		
Less amount of material returned	187 50		
		8,015 49	
Parliament Street, Queen to Winchester.			
Labor	....	59 00	
Bathurst Street, King to Queen.			
Contract	....	1,891 98	
Sherbourne Street, Bridge to South Drive.			
24½ toise macadam, $98.50 ; 214 bbls. cement, $569.24	667 74		
40 yds. sand, $31.60 ; 10 yds. stone, $16.50	48 10		
7 bbls. paving pitch	15 75		
Labor	447 64		
		1,179 23	
Gerrard Street, Parliament to Broadview.			
Contract	5,200 00		
Labor	218 00		
		5,418 00	
King Street, Dufferin to Roncesvalles.			
Contract	8,815 85		
Labor	157 00		
		8,972 85	
College Street, McCaul to Bathurst.			
Contract	....	760 12	
Carried forward	....	46,770 83	323,968 67

	$ c.	$ c.	$ c.
Brought forward	....	46,770 83	323,968 67
Spadina Crescent.			
62,700 bricks, $909.15 ; 62 bbls. cement, $164.92	1,074 07		
80 yds. sand, $52 ; 4 yds. stone, $6.60 ...	58 60		
Coal oil, globes, lanterns, etc............	5 95		
Labor	384 92		
		1,523 54	
York Street, King to Front.			
1 bbl. cement, $2.87 ; 34 ft. of 9-in. pipe, $5.10	7 97		
Contract	7,212 53		
Labor	124 33		
		7,344 83	
Broadview Avenue, Queen to Gerrard.			
Hauling bricks	22 43		
Contract	4,803 50		
Labor	148 00		
		4,973 93	
Queen Street, Yonge to River.			
Contract	....	910 88	
Carlton Street, Yonge to Parliament.			
Contract	....	620 88	
			62,144 89
SAND PUMP.			
306 gals. oils, $93.88 ; 7½ gals. varnish, $14.75..........................	108 63		
6 rubber sleeves, $153.73 ; 54 discs for globe valves, $13.44................	167 17		
Material for covering boiler, $11.25 ; gaskets, $5.65	16 90		
1,061 ft. lumber, $22.39 ; 224 bolts, $11.74	34 13		
5½ cords slabs, $18.58 ; 161$\frac{834}{2000}$ tons coal, $496.29	514 87		
166 ft. of 7-in. wrought iron pipe, $14.51 ; 1 galvanized iron pump, $6	20 51		
7 brushes, $7.10 ; files, $4.50 ; sundry tools, $9.36	20 96		
6 lbs. polish, $3.75 ; 150 lbs. tallow, $15 ; paint, $64.05......................	82 80		
6 pairs rubber boots, $27.16 ; hose couplings, $5.35 ; valves, $6.07	38 58		
1 safety valve, $75.00 ; sundry fittings, $4.53	79 53		
Provisions	446 18		
Repairs	498 97		
Carried forward	2,029 23	....	386,113 56

	$ c.	$ c.	$ c.
Brought forward	2,029 23	. ...	386,113 56
Towing, $15.50; ferry tickets, $5	20 50		
60 ft. of 12-in. pipe, $210; 2,271 lbs. castings, $46.95......	256 95		
4 mattresses	12 00		
250 lbs. oakum, $20.00; 119 lbs. waste, $12.50; packing, $17.30............	49 80		
173 ft. wire cable, $26.69; turning patterns, $2.50	29 19		
Painting signs, $4.75; inspection of pump, $25.24	29 99		
1 side leather, $4.69; 44 ft. belting, $77.62; belt dressing, $4.00........	86 31		
Linoleum, $11.50; 362 ft. rope, $20.00...	31 50		
1 snatch block, $7.75; sundry hardware, $23.02........	30 77		
12 brooms, $4.80; cans, $1.65; shovels, $1.25; lanterns, 90c	8 60		
Turps, oil soap, and sundry material	18 34		
44½ gals. black oil, $5.56; galvanized iron, $3.25	8 81		
3 globe valves, $2.55; repairing scales, $2.25	4 80		
10 yds. duck, $2.50; glasses, $1.70; wash basin, 5.25......	9 45		
Labor	2,645 39		
		....	5,271 63
SEWAGE DISPOSAL.			
187 ft. lumber, $7.11; padlocks, 70c.; screws, 84c........	8 65		
Globes, 10c.; coal oil, $1.76; levels, 50c..	2 36		
1 pair rubber boots, $3.15; 6 screw clamps, $2.40	5 55		
Boat hire	10 50		
Labor	613 24		
		....	640 30
STONE, HOUSE OF INDUSTRY.			
Labor	162 24	....	162 24
STREET RAILWAY MATTERS.			
500 time-tables, $13; 3 doz. pass books, $1.80........................	14 80		
Labor	1,110 52		
		....	1,115 32
SIDEWALK, KING STREET OPPOSITE STANLEY PARK.			
21 loads brick bats, $26.25; 38 yds. gravel, $30.06......	56 31		
42 bbls. cement	111 72		
Labor	94 23		
		....	262 26
Carried forward.	....	....	393,565 31

	$ c.	$ c.	$ c.
Brought forward	....	....	393,565 31
STREET NUMBERING.			
435 street numbers, $26.10; 1 pair snips, $1	27 10		
7 sheets galvanized iron, $6.27; shingles, $4.25	10 52		
10 lbs. drop black, $1.80; 10 lbs. white lead, 80c	2 60		
Labor	92 32		
		132 54	
STEAM ROAD ROLLER.			
Cost of roller	2,067 09		
Unloading and setting up	50 00		
Customs entry and brokerage	424 25		
Difference in exchange	8 66		
		2,550 00	
TRACK REPAIRS.			
258 yds. sand, $245.75; 50 yds. gravel, $40	285 75		
437 bbs. cement, $1,216.37; 10¼ toise macadam, $112.63	1,329 00		
63,675 scoria blocks	3,034 67		
Repairing tracks	3,506 09		
716 ft. lumber, $10.69; 83 cords cedar blocks, $94.50	105 19		
Coal oil, globes, etc	13 65		
Blacksmithing	13 85		
Labor	2,878 29		
	11,166 49		
Cr.			
800 lbs. pitch returned to stores	18 00		
		11,148 49	
WEED CUTTING.			
3 scythes, $3; 2 snaiths, $2.70	5 70		
Labor	508 00		
		513 70	
STATION STREET ASPHALT.			14,344 73
Cr.			407,910 04
Amount paid by G. T. Ry. System, as share of cost of pavement	....	....	5,000 00
RAILWAY PAVMENTS.			402,910 04
Avenue Road, Bloor to Davenport	1,517 45		
Ossington Avenue, Dundas to College	1,153 05		
Rosedale Loop Line	5 66		
Station Street, York to Simcoe	404 55		
		....	3,080 71
Carried forward	....	....	405,990 75

	$ c.	$ c.	$ c.
Brought forward	....	....	405,990 75
BRIDGES, GRADINGS, EXTENSIONS, ETC.			
Eastern Avenue Bridge.			
2,700 bricks, $20.25; 2 bbls. cement, $5.18	25 43		
5,954 ft. of 2-in. plank, $287.94; 560 lbs. nails, $12.68	300 62		
341 lbs. sheet lead, $25.86; 44 drift bolts, $11.60	37 46		
104 lbs. castings, $4.68; 50 coach screws, $10	14 68		
2,368 ft. of 4 x 4 scantling, $33.95; 51 ft. of 1-in. plank, 72c..	34 67		
Patterns, $53.88; 17 piles, $76; jute, $1.05	130 93		
10 gals. carbolineum, $5; white lead, $1.25	6 25		
1 cast iron flange, $4.46; 18 12-in. pipes, $246.60	251 06		
4 12-in. sleeves, $12.88; 380 lbs. pig lead, $13.68	26 56		
2.38 toise macadam, $25.58; 6½ yds. sand, $5.59	31 17		
14 special tag screws, $2.80; 100 bolts, $8.96	11 76		
12-in. S. pipe, $7.31; sundry tools, $7.12.	14 43		
Towing lumber, $3; sundry hardware, $7.11	10 11		
Travelling expenses....................	15 00		
Lumber and carpenter's time......... ...	98 62		
Contract	204 00		
Inspection, $3,563.81; labor, $343.63....	3,907 44		
		5,120 19	
Humber Bridge.			
3,647 ft. lumber, $119.55; 130 lbs. nails, $3.03	122 58		
Stone, $3.40; cement, 66c.; 11 toise macadam, $107.25	111 31		
8½ cords cedar posts, $42.50; piles and driving, $153.........	195 50		
Repairs to tools, $2.75; patters, $3.37; tools, $1.10	7 22		
Surveying approaches	10 00		
Placing and keeping lamps at bridge.....	29 20		
Purchase of land from Mr. Nurse........	200 00		
Inspection of material................	17 33		
Blacksmith work	18 87		
Contract	3,066 39		
Inspection, $129; labor, $1,050.97.......	1,179 97		
		4,958 37	
Queen Street Bridge, over Don.			
28,727 ft. lumber, $474.82; 1,450 lbs. nails, $44.17	518 99		
Carried forward	518 99	10,078 56	405,990 75

	$ c.	$ c.	$ c.
Brought forward	518 99	10,078 56	405,990 77
8 bronze name plates, $12 ; 4 ship augers, $5............................	17 00		
6 gross bolts, $10.35 ; 18 shovels, $18 ; spikes, 43c.	28 78		
1,028½ ft. piling, $200.65 ; 29 piles, $62..	262 65		
G. T. R. labor and material	94 57		
Inspection of material...................	60 16		
Lighting bridge	64 00		
6.81 toise macadam, $80.10 ; 1,283 ft. tamarac, $269.16......................	349 26		
Inspecting water mains..................	4 00		
Filling in abutments......................	100 50		
1¼ cords cedar posts, $6.63; 108 cords cedar blocks, $585.11.....................	591 74		
Patterns, $3.37 ; use of roller, $13.20....	16 57		
1 set street gates	579 00		
Use of pile-driver, etc..................	487 55		
Travelling expenses re stone............	20 00		
251 loads earth............................	120 35		
Cost of repairing tracks, C. P. R.........	620 20		
Wiring, fixtures Toronto Electric Light	275 00		
Power, fuse, etc., $32.20 ; 80 gallons carbolineum, $40	72 20		
Plumbing, $17.18; sundry hardware, $16.38	33 56		
80 special log screws, $16 ; 1,200 bricks, $9.30	25 30		
4 pieces sheet lead, $9.06 ; 2 rolls asphalt roofing, $5.50	14 56		
3,500 scoria blocks, $195.42 ; 1,247 ft. curbing, $21.57.......................	216 99		
Advertising, $31 ; sundry hardware, 29.60	60 60		
49 ft. pipe and sleeves, $313.75 ; 6 sheets galvanized iron, $7.20..................	320 95		
Water works, labor and material..........	374 14		
10 lbs. waste, $1.50 ; oils, $3.90..........	5 40		
Inspection..................................	213 00		
Contract, abutments........................	22,038 80		
" Steel pipe.	1,300 00		
" Hamilton Bridge Co.	15,340 00		
" Deck, W. S. Asphalt Co.......	3,159 11		
		47,384 93	
Noble Street Extension.			
Labor.......................................	60 00		
Land damages and Solicitors' charges	4,004 00		
		4,064 00	
			61,527 49
LOCAL IMPROVEMENT—SEWERS.			
Bain Avenue, Pape to Carlaw.			
Contract	680 00		
Inspection	53 28		
		733 28	
Carried forward		733 28	467,518 24

	$ c.	$ c.	$ c.
Brought forward	....	733 28	467,518 24
Custom House Lane.			
Contract	471 60		
Inspection	43 29		
		514 89	
Columbus Avenue, Sorauren to end.			
486 ft. pipe, $106.30; 39 junctions, $29.25.	135 55		
4 culvert traps, $20; 15 bbls. cement, $40.80	60 80		
4 culvert tops, $12; 1 flush tank, $25	37 00		
15 manhole steps, $2.40; 3 manhole covers, $12.50	14 90		
6,000 bricks, $49.50; 8 yds. sand, $5.20	54 70		
2 6-in. bends, $1; 48 lbs. jute, $3.84	4 84		
Repairs to syphon	34 80		
Labor	284 55		
	627 14		
Less amount paid for private drains	42 43		
		584 71	
Dupont Street, Bathurst to Howland.			
20,589 ft. lumber, $127.70; 80,000 bricks, $600	727 70		
121 bbls. cement, $326.34; 66 yds. sand, $42.90	369 24		
Slants, $10.50; bends, $4	14 50		
154 ft. of 9-in. pipe, $24.60; sundry tools, $2.75	27 35		
6 culvert traps, $30; 2 tops, $6.10	36 10		
1 manhole top, $8.25; 27 manhole steps, $4.32; stoppers, $1.80	14 37		
7 pails, $10.50; coal, oil, globes, etc., $5.80	16 30		
Sharpening tools	2 62		
Labor	1,165 75		
	2,373 93		
Less amount paid for private drains	19 80		
		2,354 13	
Dupont Street, Huron to Howland.			
Final payment, contract	....	497 00	
Davenport Road, Dupont to 1,782 ft. east of Bedford.			
Contract	1,188 70		
Inspection	109 89		
		1,298 59	
Carried forward	....	5,982 60	467,518 24

	$ c.	$ c.	$ c.
Brought forward		5,982 60	467,518 24
Fisher Street, Dufferin to Sheridan.			
Final payment, contract		76 28	
Hickory Street, St. Patrick to Lane.			
2 yds. sand	1 40		
1,000 bricks	7 50		
		8 90	
Golden Avenue, Dundas to 440 ft. North.			
Contract		107 20	
Noble Street, Queen to 240 ft. North.			
Contract	380 90		
Inspection	53 28		
Labor	29 35		
		463 53	
Queen Street, Knox to 500 ft. East.			
Final payment, contract		100 95	
Spadina Road, Dupont to North City Limits.			
200 bricks, $1.90 ; 1,343 ft. lumber, $23.04	24 94		
6 yds. sand	4 20		
		29 14	
Van Horne Street, Dufferin to Dovercourt.			
Final payment, contract		402 89	
			7,171 49
LOCAL IMPROVEMENT PAVEMENTS—ASPHALT.			
Admiral Road, Lowther to Bernard.			
2 yds. sand	1 40		
Contract	1,217 78		
		1,219 18	
Avenue Road, Bloor to Davenport.			
Final payment, contract		2,124 60	
Bernard Avenue, St. George to Bedford.			
4,075 bricks, $30.51 ; 10 bbls. cement, $25.90	56 41		
6 yds. sand, $3.90 ; coal oil, wick, etc., $1.50	5 40		
10 culvert traps (4,560 lbs.)	101 20		
Manhole tops (1,650 lbs.)	33 00		
62 ft. 9-in. pipes, $9.46 ; bends, $1.50	10 96		
Carried forward	206 97	3,343 78	474,689 73

	$	c.	$	c.	$	c.
Brought forward	206	97	3,343	78	474,689	73
Contract	4,109	59				
Inspection, $89.50 ; labor, $151.91	241	41				
			4,557	97		
Bloor Street, Avenue Road to Walmer.						
8¼ yds. sand, $6.41 ; 4 bbls. cement, $7.77	14	18				
1,300 bricks, $9.75 ; 44 ft. pipe, $6.40 ; bends, $2.50	18	65				
3 culvert traps	21	40				
Contract	18,567	16				
Inspection, $151 ; labor, $55.27	206	27				
Water works charges	12	26				
			18,839	92		
Brunswick Avenue, Ulster to Sussex.						
3,600 bricks, $27 ; 10 bbls. cement, $25.90	52	90				
9 culvert traps, $96.20 ; 4 sewer traps, $20 ; bends, $1	117	20				
5 yds. sand, $3.25 ; coal oil, 23c.; 56 ft. pipe, $8.40	11	88				
Contract	7,854	61				
Inspection, $99.50 ; labor, $144.45	243	95				
			8,280	54		
Brunswick Avenue, Bloor to Wells.						
1,460 ft. lumber, $22.24 ; 100 lbs. nails, $3.45	25	69				
4,600 bricks, $37.92 ; 18½ bbls. cement, $54.61	92	53				
2 yds. sand, $1.30 ; 12,930 lbs. castings, $258.60 ; pipe, $3.90	263	80				
1 culvert trap, $3 ; 6 gals. coal oil, $1.38.	4	38				
Contract	12,079	80				
Inspection, $105.50 ; labor, $325.71	431	21				
			12,897	41		
Boswell Ave., Avenue Road to Bedford.						
9 bbls. cement, $26.64 ; 4 yds. sand, $2.60	29	24				
1,000 bricks, $8.25 ; 7,620 lbs. castings, $112.40	120	65				
1,526 ft. sod, $61.04 ; 18 9-in. bends, $2.70 ; manhole steps, 64c	64	38				
Contract	3,297	45				
Inspection, $51 ; labor $199.66	250	66				
			3,762	38		
Cowan Avenue, King to Queen.						
Amount paid Constructing and Paving Co.	....	....	175	00		
Church Street, King to Queen.						
5,130 lbs. castings, $102.60 ; 1 sewer trap, $5	107	60				
Carried forward	107	60	51,857	00	474,689	73

	$ c.	$ c.	$ c.
Brought forward	107 60	51,857 00	474,689 73
3,000 bricks, $22.50 ; 58 ft. pipe, $8.70..	31 20		
8 yds. sand, $6.32 ; 16 bbls. cement, $39.44	45 76		
Water Works charges	113 36		
Contract	9,832 53		
Inspection, $145 ; labor, $151.29	296 29		
		10,426 74	
Classic Avenue, Spadina to Huron.			
Final payment, contract	....	68 00	
Cowan Avenue, King to Huxley.			
2,540 bricks, $21.37 ; 9½ bbls. cement, $25.20	46 57		
6,920 lbs. castings, $138.40 ; 9-in. bends, $2 ; pipe, $6	146 40		
1,664 ft. lumber, $25.73 ; nails, $1.75 ; sand, $2.13	29 61		
5 gals. coal oil, $1.15 ; 8 manhole steps, $1.28	2 43		
Contract	8,495 58		
Inspection, $79 ; labor, $174.69	253 69		
		8,974 28	
Dowling Avenue, Queen to G. T. R.			
7,610 bricks, $62.80 ; 17½ bbls. cement, $50.23	113 03		
9 old gullies, $27 ; 2 culvert traps, $10....	37 00		
66 ft. pipe, $9.49 ; 11 9-in. bends, $11....	20 49		
5,480 lbs. castings, $109.60 ; 2 manhole steps, 32c..	109 92		
10 yds. sand, $6.49 ; coal oil, 69c.; red globes, 44c	7 62		
768 ft. lumber, $11.87 ; nails, 86c........	12 73		
Contract	11,210 86		
Inspection, $138 ; labor, $269.61........	407 61		
Water Works charges	90 46		
		12,009 72	
Front Street, Jarvis to George.			
Contract	3,995 48		
Inspection	39 00		
Labor	19 72		
		4,054 20	
Glen Road, Howard to the Bridge.			
6 bbls. cement, $16.26 ; 1,000 bricks, $7.75	24 01		
12 9-in. bends, $12 ; 12 ft. of 9-in. pipe, $1.80	13 80		
8 manhole steps, $1.28 ; 3,380 lbs. castings, $67.60	68 88		
Carried forward	106 69	87,389 94	474,689 73

	$	c.	$	c.	$	c.
Brought forward	106	69	87,389	94	474,689	73
160 ft. cedar curb, $2.16 ; 2 yds. sand, $1.58	3	74				
Contract	2,363	06				
Inspection, $54.50 ; labor, $99.60	154	10				
			2,627	59		
Howland Avenue, Bloor to Barton.						
7,960 lbs. castings, $158 ; 11 9-in. bends, $11 ; 42 ft. 9-in. pipe, $6.30	175	30				
3,300 bricks, $25.08 ; 13 bbls. cement, $34.41	59	49				
1,028 yds. sod	41	12				
500 ft. lumber, $7.78 ; nails, $3.45	11	23				
3 gals. coal oil, 69c.; 3 red globes, 66c.; 2 lanterns, 70c	2	05				
Contract	6,820	38				
Inspection, $97 ; labor, $266.32	363	32				
			7,472	89		
Huron Street, Lowther to Bernard.						
3,072 bricks, $25.37 ; 10½ bbls. cement, $31.08	56	45				
3,760 lbs. castings, $75.20 ; 4 manhole tops, $43.20	118	40				
48 ft. of 9-in. pipe, $7.20 ; bends and junctions, $1.75	8	95				
2 gals. coal oil, 46c.; 2¼ yds. sand, $1.48 ; red globes, 44c.	2	38				
Contract	8,106	54				
Sodding	134	17				
Inspection, $82 ; labor, $155.39	237	39				
			8,664	28		
King Street, Simcoe to Spadina.						
1,539 ft. lumber, $22.97 ; 50 lbs. nails, $1.73	24	70				
3 bbls. cement, $8.14 ; 3 yds. sand, $1.99.	10	13				
2,165 bricks, $16.28 ; 2 round valve chamber tops, $20 ; centres, 16c.	36	44				
8,550 lbs. castings, $128.25 ; coal oil, 23c.	128	48				
Water Works charges	28	54				
Contract	20,323	18				
Inspection, $278.50 ; labor, $192.82	471	32				
			21,022	79		
King Street, Spadina to Bathurst.						
7,440 bricks, $61.16 ; 21½ bbls. cement, $62.67	123	83				
11½ yds. sand, $7.48 ; coal oil, wick, etc., $2.05	9	53				
7,990 lbs. castings, $159.80 ; 106 ft. of 9-in. pipe, $15.90	175	70				
Carried forward	309	06	127,177	49	474,689	73

	$ c.	$ c.	$ c.
Brought forward	309 06	127,177 49	474,689 73
Junctions, bends, etc., $3.95; 1 round valve chamber top, $10.............	13 95		
Toronto Railway Co., moving iron pole...	10 00		
Water Works labor	9 80		
Contract..............................	17,644 39		
Inspection, $242.50; labor, $323.44	565 94		
		18,553 14	
Lane South of Front, Scott to East End.			
122 sq. yds. of pavement at $2.06	... .	251 32	
Leader Lane, King to Colborne.			
Final payment, contract	....	146 85	
Lippincott Street, Ulster to Bloor.			
10,750 lbs. castings, $214.60; 6,450 bricks, $52.87.............	267 47		
19 bbls. cement, $49.21; 13½ yds. sand $8.69	57 90		
2 round valve chamber tops, $20; centres, 32c.; nails, $3.45	23 77		
13 9-in. bends, $13; 92 ft. of 9-in. pipe, $13.80................	26 80		
3 culvert traps, $15; coal oil, etc., $2....	17 00		
Water Works charges	26 72		
Contract..............................	12,028 89		
Inspection, $140; labor, $261.45........	401 45		
		12,850 00	
Lowther Avenue, St. George to 153 ft. east of Bedford.			
7 bbls. cement, $18.13; 4 yds. sand, $3.16	21 29		
5,600 lbs. castings, $112; 1 culvert trap, $5; 9-in. pipe, $6.90	123 90		
2,500 bricks	18 75		
Contract............................	5,155 80		
Inspection, $89; labor, $129.54	218 54		
		5,538 28	
Lowther Avenue, Spadina to Walmer.			
1,540 ft. lumber, $23.43; 100 lbs. nails, $3.45	26 88		
400 bricks, $3.30; 1 bbl. cement, $2.96	6 26		
1,110 lbs. castings, $33; 24 ft. of 9-in. pipe, $3,60	36 60		
Sand, 49c.; coal oil, 23c	72		
Contract..............................	1,725 80		
Inspection, $39; labor, $88.39..........	127 39		
		1,923 65	
Carried forward	....	166,440 73	474,689 73

	$ c.	$ c.	$ c.
Brought forward	....	166,440 73	474,689 73
Lane, east of Bay, Wellington to Melinda.			
Final payment, contract	....	52 70	
Lane, east of Lane, east of Bay.			
Final payment, contract	....	22 80	
Linden Street, Sherbourne to Huntley.			
Final payment, contract	....	750 00	
Lane, east of Leader Lane.			
Final payment, contract	....	31 70	
Manning Avenue, Harbord to Bloor.			
2,650 bricks, $21.86; 8 bbls. cement, $22.96	44 82		
3,990 lbs. castings, $79.80; 5 9-in. bends, $5; junctions, $2	86 80		
76 ft. of 9-in. pipe, $11.40; 1 manhole top, $8.10	19 50		
4 yds. sand, $2.60; red globes and wick, 24c	2 84		
Contract	7,781 73		
Inspection, $85.50; labor, $171.93	257 43		
		8,193 12	
Markham Street, College to 759 ft. South.			
4,150 ft. lumber, $8.41; 100 lbs. nails, $3.45	11 86		
2,950 bricks, $23.92; 6½ bbls. cement, $18.87	42 79		
1 round valve chamber top, $10; 9,980 lbs. castings, $59.60	69 60		
3½ yds. sand, $2.31; pipe, $1.81	4 12		
Water Works charges	18 50		
Contract	5,212 65		
Inspection, $66; labor, $126.65	192 65		
		5,552 17	
Mercer Street, John to Peter.			
4,530 bricks, $36.18; 10½ bbls. cement, $31.10	67 28		
8½ yds. sand, $5.56; 2 round valve chamber tops, $20	25 56		
2 culvert traps, $10; 3,290 lbs. castings, $65.80	75 80		
3 round manhole tops, $33; 48 ft. of 9-in. pipe, $7.20	40 20		
Carried forward	208 84	181,043 22	474,689 73

	$ c.	$ c.	$ c.
Brought forward	208 84	181,043 22	474,689 73
28 ft. of 12-in. pipe, $7 ; 1 manhole frame, $4.20	11 20		
Coal oil, etc	1 03		
Water Works charges	30 60		
Contract	4,198 22		
Inspection, $85.50 ; labor, $147.57	233 07		
		4,682 96	
Madison Avenue, Bloor to Dupont.			
Final payment, contract	....	490 33	
Manning Avenue, College to Ulster.			
5,805 bricks, $46.52 ; 13 bbls. cement, $37.56	84 08		
6¾ yds. sand, $4.42 ; 2 round valve chamber taps, $20	24 42		
4,560 lbs. castings, $91.20 ; 66 ft. of 9-in. pipe, $9.90	101 10		
5 9-in. bends, $6 ; junctions, etc., $2.09	8 09		
3 manhole tops	33 00		
1,400 ft. lumber, $21.01 ; 100 lbs. nails, $3.45	24 46		
Water Works charges	33 60		
Contract	7,095 70		
Inspection, $79 ; labor, $171.26	250 26		
		7,654 71	
Prince Arthur Avenue, St. George to 200 feet East of Bedford.			
4,480 lbs. castings, $89.60 ; 2 6-in. S pipes, $5.20	94 80		
1,000 bricks, $7.50 ; 6 bbls. cement, $15.54	23 04		
4 yds. sand, $2.60 ; 367 yds. sod, $14.68	17 28		
36 ft. of 9-in. pipe, $5.40 ; 1 6-in. sleeve, $1.38 ; pig lead, $3.61	10 39		
Water Works charges	43 35		
Inspection, $66.50 ; labor, $126.40	192 90		
		5,680 63	
Palmerston Avenue, Arthur to College.			
6,030 bricks, $49.06 ; 3 round valve chamber tops, $30.48	79 54		
13⅓ bbls. cement, $37.72 ; 7¼ yds. sand, $4.93	42 65		
2.500 ft. lumber, $37.45 ; 100 lbs. nails, $3.45	40 90		
11,630 lbs. castings, $232.60 ; 58 ft. of 9-in. pipe, $8.70	241 30		
4 9-in. bends, $4 ; 3 culvert traps, $15	19 00		
Coal oil, 69c.; globes, 22c.; 4 c. c. pipes and bends, $1.76	2 67		
Water Works charges	45 84		
Carried forward	471 90	199,551 85	474,689 73

	$ c.	$ c.	$ c.
Brought forward	471 90	199,551 85	474,689 73
Contract..............	4,800 00		
Inspection, $135.50; labor, $208.05	343 55		
		5,615 45	
Queen Street, Bathurst to Niagara.			
Final payment, contract	....	121 97	
Queen Street, River to G. T. R. Tracks.			
2 yds. sand.........................	....	1 58	
Spadina Crescent.			
5,930 lbs. castings, $118.60; 86 ft. 9-in. pipe, $12.90.	131 50		
19 bbls. cement, $53.97; 2 yds. sand, $1.34	55 31		
5,795 bricks, $46.47; 1 culvert trap, $5; bends, $1.......................	52 47		
400 ft. lumber, $6.13; 50 lbs. nails, $1.73	7 86		
Water Works charges	46 80		
Contract...	10,400 00		
Inspection, $157.50; labor, $213.05	370 55		
		11,064 49	
Spadina Avenue, Knox College to Bloor.			
Final payment, contract................	....	836 02	
Spruce Street, Parliament to Sumach.			
Final payment, contract	....	46 80	
Spadina Road, Bloor to Bernard.			
5,000 bricks, $37.50; 100 ft. lumber, $1.20	38 70		
20 bbls. cement, $56.98; 14 yds. sand, $9.10	66 08		
7,980 lbs. castings, $159.60; 7 manhole tops, $77.......................	236 60		
1 culvert trap, $5; 56 ft. 9-in. pipe, $8.40	13 40		
53 9-in. bends, $13.90; reducers, $1.....	14 90		
2,905 sq. yds. sod	156 12		
Coal oil, globes, wick, etc...............	4 12		
Contract...	12,516 80		
Inspection, $119; labor, $566.38	685 38		
		13,732 10	
Sussex Avenue, Spadina to Borden.			
3,850 lbs. castings, $77; 2 long valve chamber tops, $13; centres, 16c....	90 16		
750 ft. lumber, $10.81; 100 lbs. nails, $2.08; coal oil, $1	13 89		
22 yds. sand, $6.15; 16 bbls. cement, $41.44...........	47 59		
Carried forward	151 64	230,970 26	474,689 73

	$ c.	$ c.	$ c.
Brought forward	151 64	230,970 26	474,689 73
3,860 bricks, $28.95; 64 ft. of 9-in. pipe, $9.60	38 55		
10 culvert tops, $114; 1,396 yds. sod, $55.88	169 88		
Water Works charges	15 57		
Contract	7,507 14		
Inspection, $111.50; labor, $318.27	429 77		
		8,312 55	
Sherbourne Street, Bridge to South Drive.			
Final payment, contract	....	550 47	
St. Patrick Street, Beverley to McCaul.			
Final payment, contract	....	643 20	
Victoria Street, Adelaide to Queen.			
Final payment, contract	....	1,258 95	
			241,735 43
BRICK PAVEMENTS.			
Atkins Avenue, Brock to East End.			
36,600 bricks, $520.70; 14½ bbls. cement, $39.32	560 02		
49 yds. sand, $18.85; 62 yds. gravel, $66.98	85 83		
$1\frac{8}{128}$ cd. cedar posts, $7.50; 100 lbs. spikes, $3.60	11 10		
15 ft. 9-in. pipe, $1.50; 1 Tomlinson trap, $5; coal oil, $1.15	7 65		
Labor	196 45		
		861 05	
Amelia Street, Parliament to Sumach.			
Final payment, contract	....	1,095 42	
Bellevue Place, Bellevue to Carlyle.			
263 ft. lumber, $6.74; 100 bbls. cement, $255	261 74		
4 asphalt brooms	2 17		
Labor	3 00		
		266 91	
Buchanan Street, Yonge to Terauley.			
Lumber, $76.39; 1,500 bricks, $803.66	880 05		
163 yds. stone, $262.30; 200 bbls. cement, $421.12	683 42		
180 yds. sand, $142.20; 10 bbls. pitch, $22.39	164 59		
Carried forward	1,728 06	2,223 38	716,425 16

	$ c.	$ c.	$ c.
Brought forward	1,728 06	2,223 38	716,425 16
2 pails, $3 ; coal oil, 69c................	3 69		
Labor	733 54		
		2,465 29	
Borden Street, College to Ulster.			
Final payment, contract................	....	153 00	
Brookfield Street Queen to Humbert.			
Final payment, contract................	....	142 80	
Crawford Street, Arthur to North End.			
Final payment, contract................	....	187 00	
Concord Avenue, Bloor to 180 ft. South of Hepbourne.			
Final payment, contract................	....	238 00	
Comeron Place, Cameron to Vanauley.			
4 asphalt brooms	2 16		
79 lbs. iron..........................	1 97		
		4 13	
Fuller Street, Queen to Pearson.			
1,995 ft. lumber, $28.85; 200 lbs. nails, $4.16	33 01		
4,525 bricks, $33.88 ; 13 bbls. cement, $33.67	67 55		
6½ yds. sand, $4.33; coal oil and globes, 68c...............................	5 01		
2 manhole tops, $15.90 ; 74 ft. of 9-in. pipe, $11.48	27 38		
5 9-in. bends, $3.75 ; 5 culvert traps, $25.	28 75		
Contract	3,606 67		
Inspection $97 ; labor, $187.95..........	284 95		
		4,053 32	
Front Street, York to Simcoe.			
4,900 bricks, $36.75 ; 10 bbls. cement, $25.90	62 65		
5,620lbs. castings, $112.40; 1sewer trap, $5	117 40		
84 ft. of 9-in. pipe, $12.60; 7 yds. sand, $5.41	18 01		
Water Works charges	12 13		
Contract	5,852 59		
Inspection, $138 ; labor, $143.20........	281 20		
		6,343 98	
Carried forward	....	15,810 90	716,425 16

	$ c.	$ c.	$ c.
Brought forward	....	15,810 90	716,425 16
Grove Avenue, Foxley to Dundas.			
4 asphalt brooms, $2.17; 4 yds. sand, $2.80	4 97		
124 yds. sod, $4.34; lumber, 70c.; nails, 12c.; handles, 26c	5 42		
		10 39	
Lane South of Front, Yonge to Scott.			
1,000 bbls. paving pitch, $14.50; 99 bbls. cement, $248.73	263 23		
80 yds. stone, $132; 100 yds. gravel, $84.80	216 80		
37,000 bricks, $536.50; coal oil, 23c.; pipe, 40c	537 13		
Labor	351 18		
		1,368 34	
Lane South of King, John to Dorset.			
15,670 bricks, $223.03; 59½ bbls. cement, $147.50	370 53		
28¾ yds. sand, $18.70; 38 yds. stone, $66.50	85 20		
200 ft. lumber, $2.40; 3 bbls. pitch, $4.50	6 90		
266 ft. stone curb, $106.40; pipe and bends, $3.50	109 90		
Coal oil, 23c.; globes, 44c.; junctions, 75c	1 42		
Labor	446 62		
		1,020 57	
Lombard Street, Victoria to Church.			
1,920 bricks, $14.65; 1 culvert trap, $5..	19 65		
3 bbls. cement, $8.21; 3 yds. sand, $2.25	10 46		
22 9-in. bends, $22; 9-in. pipe, $3.30....	25 30		
Water Works charges	30 70		
Contract	3,918 20		
Inspection, $97.50; labor, $57.84	155 34		
		4,159 65	
Markham Street, Queen to Arthur.			
4,755 bricks, $36.53; 2 culvert traps, $10	46 53		
15⅜ bbls. cement, $41.67; 10⅜ yds. sand, $6.82	48 49		
4,400 ft. lumber, $66.33; 250 lbs. nails, $7.94	74 27		
2 round valve chamber tops, $20; pipe and bends, $15.40	35 40		
1,700 yds. sod, $68.04; coal oil, 69c	68 73		
Water Works charges	38 22		
Contract	9,761 14		
Inspection, $199; labor, $446.01....	645 01		
		10,717 79	
Carried forward	....	33,087 64	716,425 16

	$ c.	$ c.	$ c.
Brought forward	....	33,087 64	716,425 16
Manning Avenue, Ulster to Harbord.			
1,050 bricks, $8.66 ; 2 culvert traps, $10.	18 66		
3 bbls. cement, $8.88 ; 2 yds. sand, $1.40.	10 28		
34 ft. of 9-in. pipe, $5.10 ; 4 9-in. bends, $4 ; coal oil, 46c.	9 56		
Contract...........................	3,702 16		
Inspection, $85.50 ; labor, $110.71	196 21		
		3,936 87	
Niagara Street, Bathurst to King.			
8,165 bricks, $76.18 ; 5 round valve chamber tops, and centres, $50.80........	126 98		
13¼ yds. sand, $8.90 ; 11 yds. gravel, $13.73...........................	22 63		
18 bbls. cement, $49.62 ; 1 gully top, $8.55	58 17		
2,100 ft. lumber, $32.18 ; 100 lbs. nails, $3.45	35 63		
2 culvert traps, $10 ; 38 ft. of 9-in. pipe, $5.70	15 70		
3 9-in. bends, $3 ; Water Works charges, $117.08	120 08		
Contract...........................	9,732 32		
Inspection, $208.50 ; labor, $246.08	454 58		
		10,566 09	
Pearl Street, York to Simcoe.			
Final payment, contract................	....	51 00	
Robinson Street, Bathurst to Palmerston.			
2,960 ft. lumber, $42.86 ; 200 lbs. nails, $4.16	47 02		
2,500 bricks, $1.85 ; 1 cord cedar blocks, $2.70	4 55		
2 bbls. cement, $5.18 ; 1¼ yds. sand, 81c.	5 99		
470 lbs. lead pipe, $23.25 ; stop cock rods, $3.52	26 77		
1,140 yds. sod, $45.60 ; 3 double iron boxes, $4.80	50 40		
1 culvert trap, $5 ; pipe and bends, $1.30.	6 30		
16 ½-in. couplings........	6 00		
Contract...........................	2,921 24		
Inspection, $99.50 ; labor, $185.42	284 92		
		3,353 19	
William Street, Queen to Caer Howell.			
9,315 bricks, $75.06 ; 23 bbls. cement, $67.97	143 03		
130 ft. of 9-in. pipe, $19.50 ; 8 9-in. bends, $4.50	24 00		
7 Tomlinson traps, $35 ; 2 round valve chamber tops, $20.32	55 32		
Carried forward...............	222 35	50,994 79	716,425 16

	$ c.	$ c.	$ c.
Brought forward	222 35	50,994 79	716,425 16
13 yds. sand $8.49 ; 4,375 yds. sod, $175.	183 49		
2 6-in. valves, $26 ; 2 6-in. sleeves, $2.76.	28 76		
83 lbs. pig lead, $3.61 : jute, 40c.; lanterns, $1.05	5 06		
350 ft. lumber, $6.86 ; 50 lbs. nails, $1.73	8 59		
4¼ gals. coal oil, $1.04; globes, 44c.; c. c. pipes, 35c........................	1 83		
Contract	10,364 44		
Inspection, $265 ; labor, $586.69.	851 69		
Water Works charges	35 72		
		11,701 93	
West Lodge Avenue, Queen to 240 ft. North.			
1,824 ft. lumber $43.82 ; 150 lbs. nails, $5.18	49 00		
½ bbl. cement, $1.48 ; ¼ yd. sand, 16c....	1 64		
125 bricks	1 03		
Contract	1,261 52		
Inspection, $60.50 ; labor, $32.71	93 21		
		1,406 40	
			64,103 12
CEDAR BLOCK PAVEMENTS.			
Adelaide Street, Bay to York.			
Final payment, contract...........	....	194 50	
Arthur Street, Euclid to Dundas.			
2,100 ft. lumber, $32.09 ; nails, $1.73....	33 82		
9,395 bricks, $76.10 ; 2 culvert traps, $10.	86 10		
19½ yds. sand, $12.73 ; 15 bbls. cement, $43.66	56 39		
258 ft. of 9-in. pipe, $38.70 ; 15 9-in. bends, $15..	53 70		
1 round valve chamber top, $10 ; junctions, etc., $2.15	12 15		
Water Works charges	75 95		
Contract	4,860 00		
Inspection, $170.50 ; labor, $433.63	604 13		
		5,782 24	
Argyle Street, Dundas to Shaw.			
1,250 ft. lumber, $18.68 ; 100 lbs. nails, $3.45	22 13		
2 bbls. cement, $5.92 ; 550 bricks, $4.54.	10 46		
14 ft. of 9-in. pipe, $2.10 ; sand, 33c.....	2 43		
Contract......	990 00		
Inspection, $37 ; labor, $82.16..........	119 16		
		1,144 18	
Beatty Avenue, King to Queen.			
Final payment, contract...............	....	178 71	
Carried forward	....	7,299 63	780,528 28

	$ c.	$ c.	$ c.
Brought forward		7,299 63	780,528 28
Bay Street, Front to Esplanade.			
Final payment, contract		147 50	
Broadway Place, Spadina to 159 ft. West.			
Final payment, contract		10 36	
Berryman Street, Davenport to Hazelton.			
1,685 bricks, $12.64; 2 bbls. cement, $5.18	17 82		
2 yds. sand, $1.34; 1 round valve chamber top, $10	11 34		
Water Works charges	32 80		
Contract	850 50		
Inspection, $45.50; labor, $12.78	58 28		
		970 74	
Bellwoods Avenue, Queen to Mansfield.			
3,500 ft. lumber, $45.91; 200 lbs. nails, $4.16	50 07		
5,615 bricks, $42.11; 14½ bbls. cement, $37.85	79 96		
10 yds. sand, $7.37; 2 yds. gravel, $1.58	8 95		
7 round culvert tops, $70.64; 1 culvert trap, $5	75 64		
10 9-in. bends, $6.75; 1 manhole top, $3.06	9 81		
40 ft. of 9-in. pipe, $6; globes, lamps, etc., 78c	6 78		
2 cords cedar blocks	10 80		
Water Works charges	51 34		
Inspection, $109; labor, $272.52	381 52		
Contract	4,363 25		
		5,038 12	
Borden Street, Ulster to Bloor.			
3,500 bricks	27 53		
9¼ bbls. cement, $27.38; 5¾ yds. sand, $3.78	31 16		
52 ft. of 9-in. pipe, $7.80; 5 9-in. bends, $2.50	10 30		
1 round valve chamber top $10.16; 1 culvert trap, $5	15 16		
100 lbs. nails, $3.45; 1 gal. coal oil, 23c	3 68		
Water Works charges	24 66		
Contract	2,818 31		
Inspection, $73; labor, $211.29	284 29		
		3,217 79	
Clinton Street, Mansfield to College.			
Final payment, contract		99 70	
Carried forward		16,783 84	780,528 28

	$	c.	$	c.	$	c.
Brought forward			16,783	84	780,528	28
Claremont Street, Robinson to Arthur.						
$7\frac{1}{128}$ cords cedar blocks, $20.15; 880 ft. curb, $15.22	35	37				
68½ lbs. iron, $2; 8 yds. gravel, $6.32	8	32				
200 carriage bolts	2	70				
Contract	1,680	00				
Inspection, $55; labor, $209.37	264	37				
			1,990	76		
Claremont Street, Arthur to Mansfield.						
1,500 ft. lumber, $22.47; 200 lbs. nails, $6.90	29	37				
5,325 bricks, $43.18; 14¼ bbls. cement, $42.55	85	73				
10¾ yds. sand, $7.02; 4 yds. gravel, $3.16	10	18				
1 round valve chamber top, $10; pipe and bends, $3.30	13	30				
Coal oil, globes, etc		67				
Water Works charges	39	18				
Contract	1,453	50				
Inspection, $72.50; labor, $182.86	255	36				
			1,887	29		
Carlyle Street, St. Patrick to 376 ft. North.						
Final payment, contract			55	45		
Dundas Street, Ossington to Lunsdowne.						
7,370 bricks	86	77				
23 bbls. cement, $65.44; 14¾ yds. sand, $9.64	75	08				
6 round valve chamber tops, $60; coal oil, etc., $1.81	61	81				
9-in. pipe and bends, $6; 84 lbs. iron, $1.98	7	98				
3,300 ft. lumber, $50.56; 150 lbs. nails, $5.18	55	74				
Water Works charges	117	52				
Contract	9,490	05				
Inspection, $2.82; labor, $275.27	557	27				
			10,452	22		
Dovercourt Road, Dundas to Churchill.						
496 ft. lumber, $9.80; 150 lbs. nails, $5.18	14	98				
300 bricks, $2.47; 1 bbl. cement, $2.96	5	43				
1 culvert trap, $5; sand, 49c	5	49				
Contract	800	00				
Inspection, $55; labor, $38.74	93	74				
			919	64		
Euclid Avenue, Arthur to Robinson.						
Final payment, contract			686	89		
Carried forward			32,776	09	780,528	28

	$ c.	$ c.	$ c.
Brought forward	....	32,776 09	780,528 28
Florence Street, Dufferin to Brock.			
Final payment, contract	....	157 34	
Henderson Street, Clinton to Manning.			
Contract	391 50		
Inspection	15 00		
Labor	15 37		
		421 87	
Lippincott Street, Nassau to College.			
800 ft. lumber, $11.65; 100 lbs. nails, $2.08	13 73		
1,000 bricks, $7.50; 1 bbl. cement, $2.59; sand, 67c	10 76		
Water Works charges	12 84		
Contract	1,206 90		
Inspection, $36; labor, $46.77	82 77		
		1,327 00	
Lorne Street, Front to Esplanade.			
Final payment, contract	....	91 30	
Maple Grove Avenue, Brock to O'Hara.			
Final payment, contract	....	63 70	
Manning Avenue, Arthur to College.			
6,000 ft. lumber, $90.45; 500 lbs. nails, $7.61	98 06		
1,955 bricks, $14.66; 6 bbls. cement, $15.54	30 20		
3¾ yds. sand, $2.45; coal oil, 46c.; lantern, 35c	3 26		
Water Works charges	28 52		
Contract	2,219 40		
Inspection, $67.00; labor, $159.27	226 27		
		2,605 71	
Mansfield Avenue, Clinton to Bellwoods.			
650 ft. lumber, $9.51; nails, 52c.; sand, 85c	10 88		
400 bricks, $3; 2¼ bbls. cement, $6.47	9 47		
Contract	448 20		
Inspection, $24; labor, $34.69	58 69		
		527 24	
Metcalfe Street, Winchester to Amelia.			
1,430 bricks, $10.72; 3 bbls. cement, $8.14	18 86		
Carried forward	18 86	37,970 25	780,528 28

	$ c.	$ c.	$ c.
Brought forward	18 86	37,970 25	780,528 28
1 round valve chamber top, $10; 2 yds. sand, $1.34	11 34		
Water Works charges	28 48		
Contract	631 41		
Inspection, $30.50; labor, $28.91	59 41		
		749 50	
Marqueretta Street, Dundas to Bloor.			
1,825 bricks, $7.46; 3 bbls. cement, $8.33	15 79		
1½ yds. sand, $1; 2 round valve chamber tops, $20	21 00		
Water Works charges	24 51		
Contract	2,000 00		
Inspection, $67.50; labor, $72.85	140 35		
		2,201 65	
Nassau Street, Lippincott to Bathurst.			
Final payment, contract	....	43 90	
Oxford Street, Augusta to Lippincott.			
540 ft. lumber, $8.40; 50 lbs. nails, $1.73	10 13		
80 bricks, 66c.; ½ bbl. cement, $1.33	1 99		
Contract	316 16		
Inspection, $18; labor, $12.09	30 09		
		358 37	
Ossington Avenue, College to Bloor.			
350 ft. lumber, $5.35; nails, 86c	6 21		
8,185 bricks, $67.26; 2 round valve chamber tops, $20	87 26		
27½ bbls. cement, $78.78; 12¾ yds. sand, $8.45	87 23		
34 ft. of 9-in. pipe, $5.10; 21 9-in. bends, $21	26 10		
Coal oil, globes, lanterns, etc	2 82		
Water Works charges	16 96		
Contract	4,945 22		
Inspection, $150; labour, $332	482 00		
		5,653 80	
Palmerston Avenue, Robinson to Arthur.			
1,460 bricks, $12.05; 5 bbls. cement, $14.80	26 85		
2 culvert traps, $10; 22 ft. of 9-in. pipe, $3.30	13 30		
sand, $1.63; 12-in. pipe, 50c.; wick, 1c.	2 14		
Contract	1,891 03		
Inspection, $101; labor, $97.14	198 14		
		2,131 46	
Queen Street, Pape to Greenwoods.			
4 bbls. cement, $11.48; 600 bricks, $4.65.	16 13		
Carried forward	16 13	49,108 93	780,528 28

	$ c.	$ c.	$ c.
Brought forward	16 13	49,108 93	780,528 28
22 ft. of 9-in. pipe, $3.30 ; 1 culvert trap, $5	8 30		
Contract	6,692 83		
Inspection, $113.50 ; labor, $109.38	222 88		
		6,940 14	
Queen Street, Niagara to Gladstone.			
Final payment, contract		780 05	
Queen Street, G. T. R. Tracks to Pape Avenue.			
4,760 bricks, $35.85 ; 7 bbls. cement, $18.69 ;	54 54		
5 yds. sand, $3.35 ; 4 round valve chamber tops, $40	43 35		
20 ft. of 9-in. pipe, $3 ; water works charges $78.73	81 73		
Contract	4,614 23		
Inspection, $103.50 ; labor, $99.59	203 07		
		4,996 92	
Russell Street, George to Spadina.			
Final payment, contract		547 98	
Rolylat Street, Dundas to Grove.			
Final payment, contract		102 63	
Sackville Street, Gerrard to Carlton.			
Final payment, contract		132 14	
Spadina Avenue, Queen to Adelaide.			
Final payment, contract		1,552 62	
Sully Crescent, Sully to Shaw.			
Final payment, contract		87 30	
Sumach Street, King to Gerrard.			
8,490 bricks, $63.89; 17 bbls. cement, $44.66	108 55		
8 yds. sand, $7.61 ; 1¾ cords cedar blocks, $9.45	17 06		
7 round valve chamber tops, $70 ; pipe and bends, $1.10	71 10		
Water works charges	139 10		
Contract	4,464 39		
Inspection, $116.50 ; labor, $164.80	281 30		
		5,081 50	
Carried forward		69,330 21	780,528 28

	$ c.	$ c.	$ c.
Brought forward		69,330 21	780,528 28
Shaw Street, Arthur to College.			
3,475 bricks, $28.66; 10 bbls. cement, $28.70	57 36		
1,000 ft. lumber, $15.08; nails, $3.45	18 53		
5¼ yds. sand, $3.42; coal oil, 69c	4 11		
Pipe, $2.50; bends, $2.50	5 00		
Contract	2,630 58		
Inspection, $119; labor, $186.12	305 12		
		3,020 70	
Trinity Street, King to Mill.			
5,870 bricks, $44.36; 7 bbls. cement, $18.50	62 86		
6 yds. sand, $4.02; 1½ cords cedar blocks, $8.10	12 12		
832 ft. lumber, $12.23; nails, 86c.; pipe, $1.20	14 29		
1 culvert trap, $5; 5 round valve chamber tops, $50	55 00		
Water Works charges	99 54		
Contract	1,926 73		
Inspection, $61; labor, $59.24	120 24		
		2,290 78	
Tecumseth Street, Queen to Walnut.			
8,307 bricks, $66.12; 17 bbls. cement, $47.67	113 79		
13½ yds. sand, $8.96; 3 round valve chamber tops, $30	38 96		
28 ft. of 9-in. pipe, $4.20; 3 9-in. bends, $3; coal oil, 46c	7 66		
Manhole steps, $1.33; pipes and junctions, $1.69	3 02		
Water works charges	68 45		
Contract	800 00		
Inspection, $46; labor, $190.06	236 06		
		1,267 94	
Ulster Street, Major to Bathurst.			
2,600 bricks, $20; 5 bbls. cement, $14.06	34 06		
4¾ yds. sand, $3.12; pipe and bends, $3.29	6 41		
5,000 ft. lumber, $73.95; 200 lbs. nails, $6.90.	80 85		
1 round valve chamber top	10 00		
Water works charges	58 70		
Contract	1,335 44		
Inspection, $55.50; labor, $171.36	226 86		
		1,752 32	
Carried forward		77,661 95	780,528 28

	$ c.	$ c.	$ c.
Brought forward	....	77,661 95	780,528 28
West Lodge Avenue, Marion to 1145 ft. North.			
Final payment, contract....	....	171 64	
			77,833 59
COBBLE STONE.			
Farquar's Lane, Front to Esplanade.			
3 bbls. cement, $8.61; 1.19 toise macadam, $14.28	22 89		
1,000 bricks, $7.75; 5 toise cobble stone, $51.25	59 00		
228 yds. gravel, $180.98; 2 yds. sand, $1.58	182 56		
154 ft. of 9-in. pipe, $23.10; 1 culvert trap, $5	28 10		
Granite rubble, $3; brooms and sundry tools, $3.60	6 00		
Contract.............................	402 64		
Labor	54 36		
		....	756 15
GRAVEL.			
Elm Grove Avenue, King to Queen.			
Final payment, contract	....	105 90	
Grosvenor Street, Yonge to Queen's Park.			
550 yds. gravel, $640.40; 8 yds. sand, $6.36	646 76		
7 bbls. cement, $20.72; 2 culvert traps, $25	45 72		
75 ft. of 9-in. pipe, $11.25; 300 bricks, $24.75............................	36 00		
Sharpening tools, $1.30; coal oil and globes, $1.58..................	2 88		
Labor	378 86		
Use of roller	57 60		
		1,167 82	
			1,273 72
MACADAM.			
Beau Street, Elm to South Drive.			
64 ft. lumber, 91c.; nails, 35c...........	1 26		
Contract................................	955 00		
Inspection, $79.50; labor, $3.61	83 11		
		1,039 37	
Carlton Street, Sackville to Sumach.			
Final payment, contract................	....	146 00	
Carried forward..........	....	1,185 37	860,391 74

	$ c.	$ c.	$ c.
Brought forward	....	1,185 37	860,391 74
Division Street, Spadina to Huron.			
Final payment, contract.........	....	111 10	
Crescent Road, Yonge to Rosedale Road.			
Final payment, contract	301 11		
Labor	2 85		
		303 96	
Dufferin Street, Dundas to Lindsay.			
Lowering curb.........................	18 50		
Final payment, contract...............	524 27		
		542 77	
Davenport Road, Avenue Road to 636 ft. West.			
1,058 ft. stone curb, $404.81; 130 yds. granite, $173.64	578 45		
90 yds. gravel, $71.10; 19.19 toise macadam, $235.08......................	306 18		
6½ bbls. cement, $19.74; 616 yds. stone, $983	1,002 74		
1,000 bricks, $8.25; 1,200 weeping tile, $33	41 25		
5 culvert traps, $25; bends, $2.40; coal oil, etc, $2.53........	29 93		
Freight on stone......................	10 50		
Hauling stone	75 44		
Use of roller	38 40		
Labor	681 94		
		2,764 83	
Elgin Avenue, Avenue Rd. to Bedford Rd.			
Final payment, contract...............	....	838 80	
First Avenue, Logan to Broadview.			
Final payment, contract...............	....	1,815 13	
Givens Street, Queen to Argyle.			
Final payment, contract...............	....	219 70	
Grenville Street, Yonge to Surrey Place.			
11.25 toise macadam, $112.50; 164 yds. sand, $142.68.............	255 18		
2,600 ft. lumber, $20.50; 136 yds. stone, $133.79	154 29		
Hauling	29 75		
Labor	2 58		
		441 80	
Carried forward	....	8,223 46	860,391 74

	$ c.	$ c.	$ c.
Brought forward	....	8,223 46	860,391 74
Front Street, Sherbourne to George.			
Contract	217 14		
80 yds. sand, $14.40; 4¾ toise macadam, $58.19	72 59		
Inspection, $9; labor, $51.57	60 57		
		350 30	
Grange Road, Beverley to McCaul.			
2,510 bricks, $19.42; 7 bbls. cement, $15.40	34 82		
2 round valve chamber tops, $20; 1 culvert top, $5	25 00		
2 9-in. bends, $2; pipe, 90c.; sand, $1.13; coal oil, 46c	4 49		
Contract	862 58		
Inspection, $60; labor, $58.95	118 95		
Water Works charges	28 56		
		1,074 40	
Maple Avenue, Glen Road to Sherbourne.			
5 bbls. cement, $14.80; 2 yds. sand, $1.58	16 38		
2,400 bricks, $18.60; 62 ft. of 9-in. pipe, $9.30	27 90		
4 culvert traps, $20; bends and junctions, $2.50	22 50		
Contract	2,334 63		
Inspection, $121.50; labor, $78.31	199 81		
		2,601 22	
McKenzie Crescent, Dovercourt to Beaconsfield.			
1,500 bricks, $12.37; 5 bbls. cement, $14.80	27 17		
1,440 yds. sod, $57.60; 3¼ yds. sand, $2.11	59 71		
Bends, 50c; coal oil, 23c	73		
Labor, $169.76; inspection, $100	269 76		
Contract	1,849 95		
		2,207 32	
Hickson Avenue, St. Claren's to 294 Feet East.			
707 bricks, $582; 2 bbls. cement, $5.74; 1 yd. sand	11 56 65		
Contract	578 00		
Inspection, $46; labor, $39.56	85 56		
		675 77	
McDonell Square, Bathurst to Defoe.			
4,447 ft. curbing, $16.72; 2½ cord cedar posts, $11.25	27 97		
20¾ toise macadam, $237,88; 62 yds. gravel, $48.98	286 86		
Carried forward	314 83	15,132 47	860,391 74

	$ c.	$ c.	$ c.
Brought forward	314 83	15,132 47	860,391 74
4,167 ft. lumber, $59.30; keg spikes, $3.60	62 90		
133 lbs. iron, $3.33; globes, 22c.	3 55		
Use of roller	46 80		
Labor	310 90		
		738 98	
McPherson Avenue, Yonge to 1,330 Feet West.			
Final payment, contract	....	273 69	
North Street, St. Mary to Bloor.			
4,595 bricks, $35.95; 11 bbls. cement, $31.45	67 40		
2 round valve chamber tops	20 00		
2,097 ft. lumber, $30.81; nails, $1.90	32 71		
7 yds. sand, $5.17; 1,699 yds. sod, $67.96	73 13		
22 ft. of 9-in. pipe, $5.20; 3 culvert traps, $15	20 20		
Water Works charges	160 83		
Contract	2,188 05		
Inspection, $60; labor, $314.23	374 23		
		2,936 55	
Parliament Street, Queen to Gerrard.			
Final payment, contract	....	1,919 03	
Pembroke Street, Shuter to Wilton.			
Final payment, contract	....	177 72	
River Street, Gerrard to Spruce.			
6 bbls. cement, $17.39; 5 yds. sand, $3.83	21 22		
1,670 bricks, $13.52; 1 round valve chamber top, $10	23 52		
Water Works charges	27 44		
Contract	726 90		
Inspection, $54; labor, $72.81	126 81		
		925 89	
Sumach Street, Gerrard to Wellesley.			
Final payment, contract	....	501 20	
South Drive, Running South to Glen Road.			
Final payment, contract	....	706 17	
Spruce Street, Sumach to River.			
Final payment	133 00		
Less labor charged in error	46 80		
		86 20	
Carried forward	....	23,397 90	860,391 94

	$ c.	$ c.	$ c.
Brought forward	....	23,397 90	860,391 74
Sackville Street, Wellesley to 256 ft. North.			
Final payment, contract	60 80	60 80	
Sackville Street, Winchester to Wellesley.			
Final payment, contract	....	298 73	
Spadina Avenue, King to Front.			
1,585 yds. stone, $2,482.97; 14.87 toise stone, $141.26	2,624 23		
200 yds. macadam, $330; 27¾ toise macadam, $329.09	659 09		
1½ cords cedar blocks, $8.10; hauling, $5.40	13 50		
585 yds. sod, $23.40; 4,175 bricks, $45.31	68 71		
689 yds. gravel, $397.37; 7½ yds. sand, $4.92	402 29		
15½ bbls. cement	41 16		
2 loads building stone	30 00		
142 yds. lime stone	142 00		
5,315 ft. lumber, $64.58; nails, $2.08	66 66		
60 ft. of 9-in. pipe, $9; bends, $1.50	10 50		
4 culvert traps, $18; 2,000 ft. weeping tile, $55	73 00		
Coal oil, wick, etc	5 17		
Use of roller	148 80		
Freight on stone, etc	63 63		
Labor	1,801 00		
		6,149 74	
Strickland Place, Noble to Earnbridge.			
280 bricks, $2.31; 10 ft. pipe, $2.50; sand, 16c	4 97		
Contract	624 24		
Inspection, $57.50; labor, $30.33	87 83		
		717 04	
Shuter Street, Yonge to Sherbourne.			
11,570 bricks, $88.99; 40½ bbls. cement, $117.81	206 80		
11½ yds. sand, $8.71; 50 ft. curb, $2.03; coal oil, $1	11 74		
3,018 ft. lumber, $44.42; nails, $2.42	46 84		
16 yds. gravel, $12.64; 170 ft. pipe, $23.40	36 04		
2 round valve chamber tops, $20; 1 culvert trap, $5	25 00		
Water Works charges	60 69		
Contract	5,600 00		
Inspection, $254.50; labor, $528.88	783 38		
		6,770 49	
Carried forward	....	37,394 70	860,391 74

	$ c.	$ c.	$ c.
Brought forward	....	37,394 70	860,391 74
Sully Street, Arthur to College.			
2,240 bricks, $26.10; 21 bbls. cement, $22.68	48 78		
1 culvert trap, $10; pipe and bends, $6.99	16 99		
350 lbs. castings, $7; sand, $2.95	9 95		
2 gals. coal oil, 46c.; junctions, $1.50	1 96		
Water Works charges	16 70		
Contract	2,400 00		
Inspection, $137; labor, $140.19	277 19		
		2,771 57	
St. Mary Street, Yonge to West End.			
6 bbls. cement, $28.49; 4 yds. sand, $2.92	31 41		
2,600 bricks, $20.26; 254 ft. curb, $4.39	24 65		
873 ft. lumber, $12.83; nails, 69c.; spikes, 26c.	13 78		
1 round valve chamber top, $10; cedar posts, $1.02	11 02		
Water Works charges	30 80		
Contract	6,220 46		
Inspection, $214.50; labor, $101.06	315 56		
		6,647 68	
Victor Avenue, Broadview to Logan			
Final payment, contract	....	1,633 75	
Wellesley Street, Parliament to Sumach.			
Final payment, contract	....	787 67	
Washington Avenue, Spadina to Huron.			
Final payment, contract	....	128 70	
Woolsley Street Esther to Bathurst.			
12 bbls. cement, $34.78; 4,675 bricks, $38.58	73 36		
1,292 ft. lumber, $19.77; nails, $3.45; round valve chamber tops, $20	43 22		
7¼ yds. sand, $4.75; 68 ft. of 9-in. pipe, $10.20	14 95		
6 9-in. bends, $6; 4 culvert traps, $20	26 00		
Coal oil, 23c.; junctions, 75c.; c. c. pipe, 19c.	1 17		
Water Works charges, $23.20; expenses to Hamilton, $2.80	26 00		
Contract	4,376 30		
Inspection, $109; labor, $239.65	348 65		
		4,909 65	
			54,273 72
Carried forward	....	....	914,665 46

	$ c.	$ c.	$ c.
Brought forward			914,665 46
TAMARAC.			
Scott Street, Front to Esplanade.			
Final payment, contract	449 30		
Credit material charged in error	251 32		
			197 98
SUMMARY.			
Local Improvement Wooden Sidewalks			
1,451,691 ft. of 2-in. plank	22,162 01		
35,356 ft. of 3 and 4-in. plank	509 99		
496,896 ft. of 4x4-in. scantling	7,153 30		
61,870 lbs. nails	1,774 54		
2,003 lbs. 7-in. spikes	69 07		
Water Works charges	2,582 22		
24½ cd. cedar posts	133 88		
51½ bbls. cement	68 11		
Bricks and sundry material	620 88		
Labor	10,093 34		
		45,167 34	
Local Improvement Brick Sidewalks.			
219 ft. lumber	3 18		
570 lbs. castings	11 49		
Water Works charges	17 78		
Labor	13 55		
Inspection	12 00		
Contract	414 92		
		472 92	
Local Improvement Concrete Sidewalks.			
Lumber	86 28		
Gravel and sand	873 89		
74 ft. of 9-in. pipe	11 18		
1,744 bbls. cement	3,637 27		
Water Works charges	1,879 49		
Labor	5,513 00		
Inspection	2,312 60		
Contract	52,071 03		
Sundry material	1,248 14		
		67,632 88	
			113,273 14
Personal and Departmental accounts			37,665 78
			1,065,802 36

BRICK SIDEWALKS.

Street.	Side.	From	To	$	c.
Gould	South	Dalhousie	Mutual	297	76
Wellington	“	98 ft. 10 in. e. of York	164 ft. 4. in. w. of Bay	174	96
				472	72

CONCRETE SIDEWALLS.

Street.	Side.	From	To	$	c.
Avenue Rd	West	Bloor	Davenport	465	44
“	East	“	“	1,278	05
Admiral	“	Lowther	Bernard	865	25
“	West	“	“	933	22
Adelaide	North	Yonge	Bay	164	17
“	“	Post Office	Victoria	53	63
Bay	West	King	Wellington	400	00
Bernard	North	Avenue Road	Bedford	474	20
Bedford	East	Lowther	Bernard	627	52
Beverley	West	Queen	Cecil	2,097	40
Bernard	South	Avenue Road	Bedford	545	77
Bay	East	Temperance	Queen	578	57
Boswell	Both	Avenue Road	Bedford	1,871	29
Bloor	South	St. George	Huron	315	34
Borden	East	College	Ulster	1,004	37
Bay	“	King	S. limit of No. 11	409	42
Beverley	West	Cecil	College	16	39
Bloor	South	St. George	198 ft. east	20	97
“		Yonge	Sherbourne	165	95
Church	West	163 ft. 10-in north of Wellington.	King	52	89
Cecil	North	Huron	Spadina	278	56
“	“	Henry	Beverley	163	76
Carlton	South	Parliament	Sackville	717	07
Church	West	Queen	Shuter	722	26
College	South	Teraulay	35 ft. 6 in. west	130	64
Cecil	North	Beverley	Huron	586	33
College	South	“	“	399	78
Cecil	“	“	“	421	27
Colborne	Both	Yonge	West Market	2,138	70
Elgin Av	South	Avenue Road	Bedford	491	38
“	North	“	“	464	66
Euclid	Both	College	Ulster	2,284	96
Front	South	In front of Union	Station	35	50
“	North	York	579 ft. west	947	44

Street.	Side.	From	To		
				$	c.
Gloucester	South	Church	Jarvis	740	64
Gerrard	North	Sherbourne	Seaton	540	16
“	“	Berkeley	Parliament	455	01
Grosvenor	Both	St. Vincent	Surrey Pl	1,637	20
Huntley	East	Selby	Bloor	280	90
“	“	“	Linden	205	81
Huron	“	Lowther	Bernard	741	39
“	West	“	“	879	93
Hazelton	“	Yorkville	Davenport	1,067	97
Howland	Both	Bloor	Barton	1,350	20
Huron	West	“	Lowther	534	43
Huntley	“	Isabella	Bloor	616	41
Huron	“	Russell	“	1,632	59
“	East	“	“	1,406	08
Isabella	Both	Jarvis	Sherbourne	156	32
John	West	King	Adelaide	26	53
King	South	79 ft. 10-in w. of York	Simcoe	923	39
“	North	Spadina	Bathurst	1,382	68
“	“	St. Paul	Sackville	252	36
Leader Lane	Both	King	Colborne	34	75
Louisa	North	Yonge	1st lane west	220	68
Lowther Av	“	Avenue Road	Bedford	495	38
“	“	Spadina	North of No. 17	374	71
“	“	St. George	Huron	550	20
“	East	“	Admiral Rd	229	72
“	North	Madison	Spadina	260	37
Markham	Both	College	Harbord	2,011	13
Major	“	“	Bloor	3,586	74
Maple	“	Sherbourne	Glen Rd	21	68
Pembroke	East	Shuter	Wilton	644	21
Peter	“	Adelaide	144 ft. south	9	29
Prince Arthur	South	Bedford Road	167 ft. e. of St. George	263	00
“	North	“	St. George	364	71
Peter	East	Richmond	Queen	157	33
Queen	South	Bay	York	350	13
“	South	Simpsons	142 ft. west	222	48
“	North	Crawford	200 ft. east	523	27
Queen's Pk. Cr		East of Drynans	183 ft. east	119	59
“		13 ft. 6 in. n. of St. Albans.	99 ft. 6 in. north	72	76
Queen	North	Grant	Broadview	1,037	01
“		E. of Subway	Limit of lot No. 78.	147	00
Queen and Berti				11	00
Queen	North	85½ ft. E. of Gladstone	Dovercourt	2,763	25
Russell	“	St. George	Huron	277	54
Rose Av	Both	Winchester	Prospect	676	10
Russell	South	Huron	St. George	342	12
Spruce	North	Parliament	1st lane east	7	47
Sherbourne	East	Wellesley	Howard	155	95
St. George	“	Hoskin	Bloor	130	78
Spadina Rd	Both	Lowther	Bernard	1,648	38
Scott	East	Colborne	60 ft. 10 in. south	94	17

Street.	Side.	From	To		
				$	c.
St. Vincent	East	Grenville	Grosvenor	489	35
St. George	West	Russell	Willcock	420	57
Spadina Rd	Both	Bloor	Lowther	1,257	91
St. George	West	South of No. 92	North of No. 112.	334	94
Simcoe	East	Front	Station	340	43
Spadina	Both	Crescent	Bloor	3,014	48
Sherbourne	East	587 ft. n. of Queen.	Wilton	530	46
Shuter	North	Jarvis	George	360	33
Teraulay	West	College	84 ft. south	116	68
South Drive		North limit of No. 1	East limit of same.	113	62
Tyndall	East	354 ft. s. of King	456 ft. south	349	32
University	“	Armoury	Christopher	2,083	50
Winchester	North	Parliament	Sumach	911	02
“	South	1st lane e. of Parliament.	Metcalfe	163	45
Walmer Rd	“	Bloor	North of No. 13	518	60
Washington	Both	Huron	Spadina	538	61
Yonge	East	Alexander	Maitland	664	47
“	“	Bloor	“	456	43
Willcock	North	Spadina	Robert	308	72
				$67,727	94
Less sundry credits				95	06
				$67,632	88

LOCAL IMPROVEMENT WOODEN SIDEWALKS.

Street.	Side.	From	To		
				$	c.
Austin Av	South	Pape	615 ft. east	275	59
“	North	“	581 ft. east	49	74
Armoury	South	Chestnut	Centre Av	50	16
Argyle	“	Dovercourt	Northcote	344	46
Arnold	West	St. David	Wilton	104	47
Amelia	South	Parliament	Metcalfe	129	33
Argyle	“	Dundas	Shaw	211	47
Bellmont	“	Yonge	McMurrich	31	88
Berkeley	West	King	Front	87	61
Baxter	South	Yonge	East end	27	52
Bismarck	North	“	Park Rd	42	69
Broadview	East	Queen	Eastern	334	38
Berkeley	“	90 ft. s. of Queen	Duke	445	57
Bellair	“	Bloor	Yorkville	143	60
Broadview	“	Allen	Simpson	305	40
Buchanan	Both	Yonge	Teraulay	432	76
Bloor	South	Lansdowne	Dundas	546	43

Street.	Side.	From	To		
				$	c.
Balsam	North	Charlotte	Spadina	77	47
Berti	East	Queen	Richmond	25	34
Bruce	“	Givens	192 ft. east	44	99
Berkeley	West	Duke	Duchess	311	35
Birch	North	Yonge	West end	496	95
Broadway		Spadina	“	123	68
Brooklyn	North	Queen	Dagmar	506	78
Bartlett	West	Hallam	VanHorne	209	10
Brooklyn	East	Queen	Dagmar	521	56
Bruce	South	192 ft. e. of Givens.	Shaw	18	12
Bain	North	Pape	Carlaw	137	43
Brock	West	Dundas	Northern Railway.	572	15
Bruce	North	“	Shaw	141	13
Collahie	Both	Gladstone	Beaconsfield	256	52
Cottingham	North	Grange	101 ft. east	29	09
College	“	St. Clarens	Lansdowne	97	03
Curzon	West	Queen	Doel	301	62
Clinton	“	Bloor	223 ft. north	72	59
Chicora	South	Avenue Rd	225 ft. west	85	61
Czar	“	16 ft. w. of Yonge	North	186	91
Cherokee		Lake Shore Rd	418 ft. north	146	13
Cassimer	West	St. Patrick	North end	49	37
Concord	East	Dewson	College	436	10
Chapel	West	St. Joseph	St. Mary	162	94
Collier	North	Yonge	629 ft. west	121	53
Clinton	East	Bloor	324 ft. north	73	25
Claremont	West	Queen	Arthur	572	16
“	East	“	“	578	45
College	South	Rusholme	Lansdowne	915	86
Churchill	North	Dovercourt	715 ft. east	350	03
Chestnut	East	Hayter	Chestnut Pl	110	38
College	South	Palmerston	Clinton	303	26
Collier	“	Yonge	609 ft. east	246	53
Dundas	North	Coolmine	Rusholme	49	35
Dupont	“	Palmerston	Manning	31	48
Dundas	South	14 ft. w. of bend	Dovercourt	298	14
Dufferin	East	Bloor	North end	788	14
“	West	133 ft. n. of Main	1,341 ft. south	53	96
Dalhousie	East	141 ft. n. of Queen.	Shuter	82	48
Duncan	Both	Richmond	Adelaide	176	76
Dundas	South	Dovercourt	Gladstone	415	79
Duke	“	Ontario	Princess	111	98
Dovercourt	East	Northumberland	Shanley	174	44
Dundas	North	Ossington	Dovercourt	341	56
“	“	Lansdowne	Dufferin	622	29
Dewson	“	Dovercourt	Ossington	211	91
Dupont	“	Bathurst	Palmerston	225	47
Dovercourt	West	50 ft. n. of Dewson.	Bloor	529	53
“	“	College	Dewson	312	15
Denison	“	Queen	St. Patrick	752	62

Street.	Side.	From	To	$	c.
Edward	South	University	Centre	89	81
Eden Pl	“	Bathurst	East end	271	61
Euclid	West	Robinson	Arthur	577	11
Eastern	North	Broadview	Strange	351	56
Front	South	Princess	St. Ry. power house	126	36
Follis	North	Bathurst	Palmerston	138	94
Fuller	West	Pearson	Marion	103	00
Grenville	South	Yonge	Elizabeth	316	23
Garden	North	Sorauren	633 ft. west	261	20
“	South	“	“	254	63
George	West	Queen	Duchess	125	59
Gerrard	South	Yonge	Teraulay	351	66
Givens	West	Arthur	College	147	47
Hagerman	South	Elizabeth	East end	48	86
Harbord	“	Spadina	St. George	262	70
Hickory	North	St. Patrick	North end	54	39
Hamilton	East	Elliott	Gerrard	252	33
Hazelton	“	Yorkville	Davenport	428	03
Hayter	North	Yonge	Chestnut	361	35
Hallam	“	Dovercourt	Dufferin	353	93
Henderson	West	Manning	Grace	134	30
Havelock	“	Bloor	763 ft. south	412	02
Howland	Both	Barton	Wells	477	48
Harbord	South	Manning	Clinton	143	44
Irwin Av	North	Yonge	St. Nicholas	105	73
“	“	St. Nicholas	Chapel	208	24
“	South	“	“	82	64
Kensington	East	St. Andrews	Baldwin	51	02
Lennox	Both	Lippincott	Bathurst	13	99
Laing	West	“	Eastern	124	10
Lansdowne	East	192 ft. n. of College	553 ft. north	106	25
Lennox	North	Bathurst	Manning	380	83
Lake Shore Rd		Manitou	25 ft. e. of Hooper	423	32
Leonard	Both	Nassau	Bellevue	449	48
Laing	East	Queen	230 ft. s. of Eastern	226	12
Lansdowne	“	Bloor	114 ft. s. of Wallace	298	90
Lennox	Both	Lippincott	Borden	279	11
Macpherson	North	Yonge	Avenue Rd	865	65
Morrison	West	Adelaide	207 ft. south	93	87
Marion	Both	Roncesvalles	East terminus	437	44
Marlboro	South	Yonge	1,345 ft. west	556	89
Metcalfe	Both	Winchester	Amelia	296	80
Maude	North	Perth	255 ft. west	52	52
Middleton	South	Brock	Sheridan	105	97
Melville	North	Christie	West end	157	30
“	South	“	“	344	40

Street.	Side.	From	To	$	c.
Mansfield	South	Manning	Clinton	49	83
Mechanic	Both	Delaney	Wyndham	179	77
McKenzie Cr	Both	Dovercourt	Beaconsfield	482	69
Niagara	North	Portland	Bathurst	322	81
Napier	Both	Munroe	West end	145	54
Niagara	South	Tecumseth	Bathurst	281	34
Nelson	North	Duncan	Simcoe	173	33
Northcote	West	Queen	Argyle	442	50
North Lisgar	East	Dundas	375 ft. south	126	18
Natalie	North	Booth	Logan	162	80
Oak	West	Parliament	Sackville	262	72
Oxford	North	Lippincott	Bellevue	205	70
Olive	South	Bathurst	Palmerston	144	13
Phipps	South	St. Vincent	St. Nicholas	81	03
Preston	East	100 ft. n. of Bloor	Hallam	477	00
Palmerston	West	Arthur	College	533	40
Pape	“	G. T. R.	Frizzell	615	21
Queen	South	Power	246 ft. east	83	46
“	North	Pape	Curzon	506	12
“	“	Kingston Rd	“	1,258	86
Robinson	South	Palmerston	Manning	213	59
“	North	Euclid	Bellwoods	239	45
Rebecca	South	Givens	Dundas	73	45
Russett	East	Bloor	North end	222	53
Rebecca	North	Givens	Dundas	74	64
Rusholme	East	Dundas	St. Anne	194	88
River	West	Queen	Gerrard	774	81
Sackville	“	Oak	“	28	45
St. Patrick	South	Denison	Bathurst	49	23
Suffolk Pl		N., S. and W. from	Homewood	321	00
Sheridan	East	Florence	Bank	298	25
Sherbourne	“	Front	King	90	46
Steiner	Both	Matilda	North end	196	64
Sunnyside		Queen	473 ft. north	123	45
St. Patrick	West	“	121 “	40	12
Sheppard's Lane	“	Bathurst	Markham	64	98
Seaton	“	Queen	Wilton	224	76
Sussex	North	Brunswick	Borden	114	88
“	South	“	“	93	90
Sully Cres	North	Sully	Shaw	138	49
Salem	Both	Bloor	Shanley	504	34
Shaftesbury	North	Yonge	125 ft. east	57	80
Scollard	“	1st lane w. of Yonge	295 ft. west	103	77
Salem	West	Hallam	Van Horne	210	01
Sumach	“	Winchester	Wellesley	278	76
Sully Cr	South	Sully	Shaw	136	46
Sackville	East	Salisbury	North end	282	84

Street.	Side.	From	To	$	c.
Summerhill	North ..	Ottawa	83 ft. east	27	58
Strachan	West ..	King	Queen	382	09
Sumach	East....	"	"	169	03
"	West ..	"	"	189	09
"	" ..	Spruce............	Carlton	173	52
Scollard	North ..	295 ft. w. of Yonge.	Hazelton	353	55
Trinity	East....	Front	Mill	142	33
Turner	South .	Tecumseth	West end	93	91
Tecumseth	North ..	Niagara	Wellington	71	13
Taylor	" ..	Sumach	195 ft. east	49	57
"	" ..	192 ft. w. of River.	73 ft. west	16	77
Teraulay.......	East....	Gerrard...........	121 ft. north	36	16
"	" ..	Hayter	Buchanan	66	22
Yonge........... ..	East....	Price	Shaftesbury	208	74
Yorkville	South ..	Yonge......... ..	Avenue Rd........	597	31
Yarmouth	" ..	Christie	West end	153	61
Wilton Av	North ..	Berkeley	Parliament....... ..	97	24
Wellington........	" ..	Bathurst	Tecumseth	380	57
Walton	" ..	Yonge	Elizabeth	312	33
Westmoreland	East....	Bloor	Shanley	240	48
Wallace	Both ..	Dufferin	107 ft. e. of Sheridan	570	54
Wellesley	South ..	Ontario	299 ft. west	100	64
Westmoreland	West ..	Shanley	Van Horne	474	09
				45,477	58
Less amounts charged in error to sundry sidewalks				310	24
				45,167	34

WATER WORKS DEPARTMENT

For Abstract of Charges see page	ACCOUNTS.	$ c.	$ c.	$ c.
	MAINTENANCE.			
157	Maintenance of distribution......	25,651 85		
158	Main Pumping Station	80.339 85		
160	Meter and Machine Shop	9,788 25		
161	Press and Store House	3,420 01		
162	" " hydrants and valves	4,520 62		
162	High Level Station........... ..	9,693 52		
163	Reservoir	4,986 12		
164	Cartage	3,528 75		
164	Miscellaneous	555 92		
164	Island Water Works (maintenance)	2,173 03		
164	Inspection and examination of conduit	414 94		
			145,072 86	
	CONSTRUCTION.			
165	House services..................	8,846 84		
166	Revenue mains	4,982 23		
			13,829 07	
	RENEWALS.			
166	House services..................	....	6,501 92	
	SPECIAL SERVICES.			
170	Island fire protection............	266 75		
169	12-in. main, King Street west....	70 89		
169	Lane in rear of Hort'l Gardens ...	5 90		
169	Pipe across Eastern Ave. bridge..	620 24		
169	Waste prevention	1,554 82		
			2,518 60	
				167,922 45

	$	c	$	c.	$	c.
MAINTENANCE.						
MAINTENANCE OF DISTRIBUTION.						
47 sleeves, $81.14 ; 69 elbows, $7.99 ; nipples, $8.16	97	29				
16 valve boxes, $33.67 ; 41 meter boxes, $140	173	67				
91,250 bricks, $949.50 ; 146 bbls. cement, $399.94	1,349	44				
30 1575/2000 tons coal, $158.19 ; 224.45 gals. coal oil, $46.51	204	70				
170 round valve chamber tops, $1,700.80 ; 1,251 cement service plates, $195.88..	1,896	78				
330 stop cock rods, $73.46 ; 347 single cocks, $233.70	307	16				
265 brass couplings, $101.35 ; 116 brass nipples, $27.95....................	129	30				
11,290 ft. lumber, $107.82 ; 1,500 nails, $44.35...........	152	17				
119 yds. sand, $86.19 ; saw dust, $20.80..	106	99				
92 lbs. rope, $14.31 ; 6 pair rubber boots, $26.16.........................	40	47				
234½ lbs. lead pipe, $120.56 ; 1,215 ft. wrought iron pipe, $120.08	240	64				
Cost of painting and repairing buoys.....	66	67				
Ferry tickets, $22.70 ; boat hire, $2.75 ; repairs, $8.55.....................	34	00				
5 gals. paint, $7 ; 7 gals. meth spirits, $17.50.........................	24	50				
65 lbs. jute, $5.05 ; packing, 64c.; sundry hardware, $22.45	28	14				
Patterns, $154.47 ; travelling expenses, $5.60	160	07				
Rental of water lots	300	00				
17 double cocks, $22.95 ; 21 double cocks, $27.99..........................	50	94				
4 single branches, $12.96 ; 11 hydrants, $361.25	374	21				
136 round service plates, $7.92 ; 8 valves, $146.05; valve guards, $6.25........	160	22				
Waggon parts and repairs, $75.42; horse shoeing, $65.75....................	141	17				
Shellac, varnish, turps and boiled oil, etc.	29	45				
115 double iron boxes, $160.50 ; 204 single iron boxes, $205	365	50				
Horse feed and straw, $297.75 ; harness fittings, $13.25	311	00				
20 lanterns, $10.42 ; sundry tools, $20.42.	30	84				
1 pair diver's boots, $18 ; rubber goods, $7.90	25	90				
20 pails, $7.80 ; brushes, brooms, etc., $17.35.........................	25	15				
Carried forward	6,826	37	....	.....	.....	......

		$ c.	$ c.	$ c.
Brought forward		6,826 37		
102 ft. iron pipe, $16.86; 10 6-in. single pipes, $45.62; 9 ft. of 6-in. pipe, $31.14		93 62		
3 cords wood, $17.23; 3 bundles shingles, $2.25		19 48		
1,473 lbs. pig lead, $60.15; sundry fittings, $32.06		92 21		
9 round valve chamber tops, $58.50; elbows, $7.38; valves, $5.92		71 80		
Plumbing, $17.76; blacksmithing, $239.57		257 33		
Hire of horse, $10; harness repairs, $10.53; 1 load hay, $13.14		33 67		
Doors and jambs, $10; 1 cylinder lock, $16.85		26 85		
1 hydrant body, $19.50; 1 hydrant jacket, $4.50		24 00		
50 ft. of tile pipe, $7.50; 50 lbs. castings, $7.60		15 10		
Sundry hardware, $7.18; brass fittings, $172.50		179 68		
2 dating stamps, $7; 28 wrenches, $29.80.		36 80		
124 ft. moulding, $6.30; 62 lbs. wire, $21.78		28 08		
37 yds. gravel		27 73		
108 lbs. iron, $3.75; cast iron pipes, $21.74		25 49		
24 lantern globes, $4.14; sundry tools, $12.39		16 53		
1,360 lbs. r. r. iron $50.60; lead, $1.50		52 10		
Sundry material		10 19		
Rent of 'phone		115 00		
Labor		20,432 20		
		28,384 23		
Less amount paid Treasurer for constructing valve chambers.	$2,521 93			
Material used, connecting sewers with mains	12 79			
Deposit on loan of pipe	100 00			
Repairing pipe	2 50			
Am't paid by Revenue Branch.	16 00			
Am't charged in error	79 16			
		2,732 38		
			25,651 85	
MAIN PUMPING STATION.				
Rental of water lots		1,540 00		
Extending siding		82 11		
Valves, $94.28; elbows, $7.58; sectional rings, $32.18		134 04		
10 gals. turps, $8; 57 boxes polish, $16.38		24 38		
13 thermometers		17 50		
Carried forward		1,798 03	25,651 85	

	$	c.	$	c.	$	c.
Brought forward	1,798	03	25,651	85		
3,369 lbs. boiler purger, $134.76; tube cleaners, $15.90	150	66				
676 lbs. soap, $47.93; 96 lbs. candles, $12.84	60	77				
1,000½ lbs. phosphor bronze wire, $390.90; flanges and bolts, $11.12	402	02				
30 shovels, $34.50; 12 globes, $11.40	45	90				
1,332¼ lbs. phosphor bronze castings, $224.79; brass and copper castings, $109.76	334	55				
3,700 fire bricks, $126; 128 bbls. fire clay, $126.90	252	90				
Rolling sheet iron	177	15				
837 ft. wrought iron pipe, $87.44; bushings, $8.59; tees, $9.05	105	08				
9 pairs rubber boots, $40.66; 320 lbs. rubber valves, $141.80	182	46				
45½ cords wood, $157.46; sundry material, $16.43	173	89				
97 lbs. blue stone, $24.14; 362¼ lbs. packing, $149.01	173	15				
Asbestos packing, $3.60; 4,026 lbs. waste, $420.30	423	90				
Nipples, $27.46; sundry fittings, $15.51	42	97				
70 brooms, $18.40; 51 brushes, $12.86; coal scoops, $6.90	38	16				
Sundry hardware	46	93				
279.35 gals. coal oil, $58.84; 2 oil cups, $7	65	84				
168 guage glasses, $30; 1 set stocks and dies, $19.50	49	50				
3,890 lbs. sheet iron, $122.05; 11 grate bars, $12.98	135	03				
204 tins lye, $17; 2 loads mortar, $9	26	00				
2,081.59 gals. engine oil, $576.59; 1909.88 gals. cylinder oil, $720.69	1,297	28				
10,016 bbls. boiler compound	330	71				
12,568$\frac{448}{2000}$ tons bituminous coal	33,185	34				
2,318$\frac{805}{2000}$ tons anthracite coal	9,003	37				
5,500 bricks, $44.25; 300 red bricks, $3.75	48	00				
Repairing scales, $93.90; inspecting scales, $6.17	100	07				
Incandescent drop wire, $3; incandescent lamps, $9.99	12	90				
91¼ lbs. gaskets, $56.16; 4 Jenkins valves, $24.05	80	21				
Unions, $7.38; brass plugs, $7.74; flanges, $7.94	23	06				
6 2-in. cast iron cocks, $46.50; 2 doz. valve seats, $5.40	51	90				
8,600 carbons, $220.57; cement, $50.56; brass rods, $9.87	281	00				
24 files, $16.98; 3 drills, $7.10; stove pipes, $8.25	32	33				
Carried forward	49,131	06	25,651	85		

	$ c.	$ c.	$ c.
Brought forward	49,131 06	25,651 85	....
Repairs, $124.76; sundry tools, $14.58 ..	139 34		
26 lbs. washers, $10.68; 793 lbs. forged steel, $42.56	53 24		
6 stuffing boxes, $19.60; 125 ft. hose, $12.69	32 29		
Sundry material	19 50		
20 bbls. gray lime, $10; 22 gals. japan, $16.30	26 30		
4,735 ft. lumber, $83.32; nails, $3.12....	86 44		
2 coils bronze spring wire, $8.47; castings, $3; patterns, $9............	20 47		
Boiled oil, $4.90; wire, 21.42; glass, $6.87	33 19		
108 charcoal tubes	334 80		
30 doz. express recording sheets	18 25		
Boilermakers' time and material	78 16		
Blacksmiths' time.....................	285 18		
Carting coal and ashes............	2,370 61		
Rent of 'phone	121 60		
Oil tanks and fittings	81 60		
Analysis of oils, $85; rent of scales, $11.50	96 50		
1 feed lubricator	10 00		
67 ft. tubing, $28.73; belting, $57.76....	86 49		
Labor	27,314 83		
METER AND MACHINE SHOP.		80,339 85	
111 meter boxes, $366.38; meter parts, $513.78	880 16		
Plain nipples, $44.56; brass screwed nipples, $27.13	71 69		
10 rubber rings, $66.40; felt rings, $1.75	68 15		
15 gals. turpentine, $11.76; 31 gals. coal oil, $6.91	18 67		
37 driving nipples, $11.27; 40 flanges, $52 59...................... ..	63 86		
125 sockets, $12.10; 2 check valves, $16.53	28 63		
1,625 lbs. brass and bronze castings......	227 15		
77 brass couplings, $34.16; 63 Unions, $20.82..........................	54 98		
9,916¾ lbs. iron, $256.25; 244 lbs. steel, $32.46..........................	288 71		
469 ft. wrought iron pipe, $50.35; 8 Chapman valves, $10.38	60 73		
63 tons coal, $337.29; 9 cords wood, $34.61	371 90		
92 elbows, $22.49; 152 bushings, $27.11.	49 60		
48 intermediate gear, $104.75; sundry fittings, $56.52	161 27		
220 lbs. waste, $21.08; 66 lbs. packing, $7.92	29 00		
42 lbs. candles, $5.82; brooms, $2.61; brushes, $5.77	14 20		
Carried forward	2,388 70	105,991 70	....

			$	c.	$	c.	$	c.
Brought forward			2,388	70	105,991	70	....	....
2 pairs rubber boots, $8.56; 10 yds. asbestos packing, $5.10			13	66				
Patterns $7.90; 12 copper floats, $9			16	90				
Files, $30.83; 161 machine bolts, $9.01; hammers, $2.55			42	39				
Moving earth, $10.00; sundry tools, $48.87			58	87				
1,019 lbs. lead pipe, $52.07; iron pipe, $13.73			65	80				
3 Crown meter rings, $11.50; 3 Crown meter gear, $9.75			21	25				
1 6-in. Crown valve, $14.95; 2-in. peet valves, $4.50			19	45				
71 lbs. soap, $4.95; 13 gals. Japan, $7.50; paint. $8.47			20	92				
2 2-in. screens, $16.00; 1 6-in. gun metal bushing, $25.00			41	00				
2 bbls. cement, $5.64; 42 gals. engine oil $11.76			17	40				
2,495 ft. lumber, $38.44; 200 lbs, nails, $6.15			44	59				
1 grindstone, $11.45; 1 grindstone frame, $5.75			17	20				
1 5-in. Siemens meter, $200; G. valves, $4.50; H. S. blades, $5.25			209	75				
4 gals. sperm oil, $9.00; 121 lbs. packing, $19.57			28	57				
7 wrenches, $9.20; sundry tools, $17.08			26	28				
Putty, boiled oil, etc			8	03				
Bolts, nuts and washers, $4.61; 1 1-in. valve, $1.82; ½-in. C. cock, $1.50			7	93				
Handles, $1.87; 1 mud box, $3; 26 bbls. sawdust, $2.60			7	47				
Plugs, $1.06; 100 lbs. pig lead, $3.61			4	67				
Cartage, $7.50; 2-in. pipe caps, $3			10	50				
1 lb. rubber blocks, $3; valves, $6.60			9	60				
50 ft. hose, $3.38; 29 ft. belting, $4.73			8	11				
72 sheets emery, $2.05; 5 pails, $1.75			3	80				
4 single iron boxes, $4.60; sundry hardware, $38.98			43	58				
Labor			8,341	92				
			11,478	34				
Less am't paid for blacksmithing	$1,410	63						
Scrap	160	76						
Repairing meters	40	50						
Loan of meters	78	20						
			1,690	09				
					9,788	25		
PRESS AND STORE HOUSE.								
159 ft. sheeting, $4.71; 1 window shade, $1			5	71				
Painting, etc			97	50				
Carried forward			103	21	115,779	95	......	......

	$ c.	$ c.	$ c.
Brought forward	103 21	115,779 95	....
8½ tons coal, $43.25 ; 2¼ cd. wood, $14	57 25		
4 files, $2.90 ; glass, 52c. ; sundry hardware, $1.30	4 72		
Rent of 'phone, $45 ; changing 'phone, $1	46 00		
Sundry fittings	2 90		
Labor	3,939 80		
Blacksmithing	113 78		
	4,267 66		
Less am't paid for scrap	847 65		
		3,420 01	
HYDRANTS AND VALVES.			
547 ft. lumber, $24.93 ; nails, $1.48	26 41		
$5\frac{58}{2000}$ tons coal, $28.61 ; ½ cord wood, $1.88	30 49		
807 lbs. leather, $117.50 ; 23 jacket tops, $41.40	158 90		
4 lbs. tallow, $1.40 ; 12 lbs. soap, $1.01 ; paint, $2.95	5 36		
2 ft. wire netting, $1.20 ; latches, knobs and locks, $2.10	3 30		
Coal oil, 35c. ; candles, 84c	1 19		
2 hydrants bodies, $39 ; sundry fittings, $11.36	50 36		
Brooms, $1.05 ; wrenches, $1.40 ; files, $10.99	13 44		
Lead pipe, $1.94 ; 17 lbs. waste, $1.79	3 73		
684 lbs. castings, $133.97 ; sundry fittings, $1.50	135 47		
5 lbs. rivets, $1.25 ; 25 brass plugs, $4.25	5 50		
Sundry material	2 82		
Labor	4,232 72		
	4,669 69		
Less amount paid for use of hydrant .... $ 30 00 Moving hydrants 119 07			
	149 07		
		4,520 62	
HIGH LEVEL STATION.			
253.96 gals. cylinder oil, $93.39 ; 124.49 engine oil, $34.25	127 64		
$95\frac{3}{16}$ lbs. packing	55 12		
$1,439\frac{1522}{2000}$ tons bituminous coal	4,039 53		
$4\frac{681}{2000}$ tons anthracite coal	21 65		
Carting coal and ashes	260 16		
255 lbs. soap, $10.52 ; japan, $1.50 ; boiled oil, $2.80	14 82		
4 gals. paint, $4 ; 95.80 gals. coal oil, $27.18	31 18		
Carried forward	4,550 10	123,720 58	....

	$ c.	$ c.	$ c.
Brought forward	4,550 10	123,720 58	....
1,799 lbs. waste, $130.10; 4 pck. alabastine, $2	132 10		
Patterns, $46.70; 380 lbs. castings, $7.64	54 34		
Jenk. valves, $2.64; elastic rings, $1.65; nuts, $1.68	5 97		
Pails, $1.05; brooms, $7.20; files, $2.98; cans, 50c	11 73		
7⅛ lbs. gaskets, $3.76; 339 lbs. phosphor bronze castings, $57.63	61 39		
1,458 ft. lumber, $22.62; nails, 50c.; screws, $2.51	25 63		
100 ft. wire halyards, $3·50; 33 ft. leather, $17	20 50		
78 lbs. candles, $10.92; 14 tins lye, $2...	12 92		
Sundry material, $7.73; brushes, $3.25..	10 98		
106 lbs. steel, $6.30; 160 lbs. pig lead, $7.22	13 52		
20 gas regulators, $4.59; sundry fittings, $18.63	23 22		
50 ft. hose	8 75		
Interest on value of siding.............	4 25		
Rent of 'phone	67 00		
Boilermaker's time, $2.80; blacksmithing, $30.51	33 31		
Labor	4,657 81		
		9,693 52	
RESERVOIR.			
Electric lighting, $325.78; rent of stone, $60	385 78		
45 pans, $75; furnace fittings, $45.00....	120 00		
300 ft. of d. d. glass, $20; packing $2.55..	22 55		
20 gals. coal oil, $4.32; lanterns, $1	5 32		
Picks and handles, $1.10; pails, $2.10; scythes, $2......................	5 20		
49 brooms, $39.90; sundry tools, 76c	40 66		
9 pairs rubber boots, $36.34; 210 lbs. nails, $7.70	44 04		
Horse feed and straw	117 82		
Horse shoeing, $3; blacksmithing, $1.16.	4 16		
$84\frac{545}{2000}$ tons coal, $460.35; 2 cords wood, $8.25	468 60		
Bulbs, $100.50; 75 plants, $22.50	123 00		
7 shovels, $6; trowels, $1.60; scythe stones, $3.20.....................	10 80		
Repairs to pump, etc..................	8 75		
19 gas regulators, $4.36; 50 lbs. putty, $1.50	5 86		
Labor	3,623 58		
		4,986 12	
Carried forward	....	138,400 22	....

	$	c.	$	c.	$	c.
Brought forward	....		138,400	22	....	.
MISCELLANEOUS.						
3 oak cabinets, $87.50; cupboard doors, $5.50	93	00				
Stamps, etc., $50; car tickets, $25	75	00				
Draughting board, $8.50 ; 76 ft. bass, $4..	12	50				
Petty cash for sundry petty expenses	20	00				
5 gals. linseed oil, $3.35 ; sundry material, $2.50	5	85				
Window sash and frame, $5; 423 ft. lumber, $16.98	21	98				
Hack hire, $2.25 ; castings, $2.........	4	25				
Labor	323	34				
			555	92		
CARTAGE.						
Wagon parts and repairs............	53	48				
Harness repairs and fittings............	58	21				
Horse feed and straw	440	03				
Horse shoeing, $44.50 ; horses, $255	299	50				
Clipping 6 horses, $9 ; veterinary services, $10.50............	19	50				
Hire of horse, $55; sundry material, $5.58.	60	58				
Blacksmith work	70	90				
Labor	2,526	55				
			3,528	75		
INSPECTION AND EXAMINATION OF CONDUIT.						
12 months' use of wire to Island.........	150	00				
Hire of Clarke's steamer............	76	50				
Repairs to boat............	13	50				
Diving dress, $40 ; duty on same, $14.50.	54	50				
Blacksmithing, 62c. ; files, 60c.........	1	22				
Labor	119	22				
			414	94		
ISLAND WATER WORKS.						
4 pairs rubber boots, $15.99; valves, $15.24	31	23				
48.91 gals. coal oil, $11.25 ; raw oil, $3.35	14	60				
$93\frac{1519}{2000}$ tons coal, $285.73 ; carting coal, $16.89............	302	62				
Rent of 'phone, $45 ; rent of water lots, $87.50............	132	50				
15 gals. paint, $19.95 ; white lead, $3.75.	23	70				
100 ft. chain, $5 ; 206 ft. wrought iron pipe, $18............	23	00				
Mineral wool, $4.92; 5¼ lbs. packing, $2.82	7	74				
3.288 ft. lumber, $53.43; sundry tools, $7.36	60	79				
50 2-in. nipples, $11.50 ; 25 steel elbows, $8.50	20	00				
Carried forward............	616	18	142,899	83	....	.

	$ c.	$ c.	$ c.
Brought forward	616 18	142,899 83	....
3 Chapman valves, $2.79; 25 cast iron elbows, $5.75	8 54		
Ferry fares, $14.20; towing, $83.55; boat hire, $2.25	100 00		
1 steam whistle, $10; sundry hardware, $6.10	16 10		
25 ft. fly wire, $2.01; brushes, $2.35; lamps, etc., $3	7 36		
1 single iron box, $1; 155 lbs. lead pipe, $7.67	8 67		
Boiled oil, $1.40; doors, $2.50	3 90		
Sundry fittings	11 24		
Blacksmithing	5 56		
Labor	1,395 48		
		2,173 03	
			145,072 86
CONSTRUCTION.			
House Services.			
319 double iron boxes, $503.58; 36 single iron boxes, $361.86	865 44		
1,477 stop cock rods, $323.58; 1,244 single cocks, $939.47	1,263 05		
165 double cocks, $242.67; 27 valves, $225.05	467 72		
593 ft. iron pipe, $182.73; 19 lengths of iron pipe, $146.17	228 90		
78,651 lbs. lead pipe	4,178 69		
2 Globe valves, $23.45; 32 sleeves, $64.43	87 88		
190 brass screwed nipples, $54.42; bends, $3.30	57 72		
1 hydrant, $27; 519 ft. wrought iron pipe, $58.24	85 24		
35 lbs. jute, $2.80; 2,026 lbs. pig lead, $78.09.	80 89		
444 plain nipples, $117.13; peet valves, $2.20	119 33		
Refunds	42 87		
1,228½ brass couplings	455 89		
5 round valve chamber tops, $50.16; 3 long valve chamber tops, $19.50	69 66		
152 driving nipples, $39.88; elbows, $7.30	47 18		
17 single branches, $58.18; 1 reducer pipe, $5.12	63 30		
25 valve boxes, $55.22; 6 S. pipes, $15.60	70 82		
72 cement service plates, $11.52; sundry fittings, $1.11	12 53		
Blacksmith's time	635 51		
Labor	3,544 93		
	12,377 65		
Carried forward	12,377 65	....	145,072 86

		$ c.	$ c.	$ c.
Brought forward		12,377 65		145,072 86
Am't paid Treasurer	$2,519 02			
" moving services, Works Dept	1,011 79			
		3,530 81		
				8,846 84
Renewals.				
House Services.				
311 double iron boxes, $483.78; 357 single iron boxes, $346.42		830 20		
249 stop cock rods		54 78		
45 brass couplings, $16.77; 120 plugs, $7.56		24 33		
147 plain nipples		41 13		
228 brass screwed nipples		63 43		
1,528 lbs. lead pipe		75 00		
653 stop cocks		487 60		
1 length of cast iron pipe, $9.60; 76 cement service plates, $3.36		12 96		
578 couplings		240 31		
58 driving nipples, $14.98; nails, $9.40		24 38		
72 double cocks		96 24		
36 lbs. wire		12 60		
Labor		4,538 96		
				6,501 92
REVENUE MAINS.				
Wright Avenue.				
346 ft. of 6-in. pipe, $163.20; 1 single branch, $2.13		165 33		
2 hydrants, $54; sleeves, $1.38		55 38		
110 lbs. scrap lead, $3.30; 5 lbs. jute, 35c.		3 65		
Labor		129 82		
			354 18	
Simpson Avenue.				
21 ft. of 6-in. pipe		100 80		
Labor		73 44		
			174 24	
Hogarth Avenue.				
654 ft. of 4-in. pipe		211 25		
Labor		170 99		
			382 24	
Danforth Avenue.				
1,101 ft. of 4-in. pipe		357 50		
Labor		182 79		
			540 29	
Carried forward			1,450 95	160,421 62

	$ c.	$ c.	$ c.
Brought forward		1,450 95	160,421 62
Bruce Street.			
26 ft. of 4-in. pipe	84 50		
Labor	57 91	142 41	
Gladstone Avenue.			
Labor		2 13	
St. George Street.			
2 hydrants, $54 ; 1 6-in. sleeve, $1.84	55 84		
23 ft. of 6-in. pipe, $169.85 ; 1 single branch, $2.13	161 98		
Contract	114 67		
Labor	14 63	347 12	
Crescent Road.			
Amount paid by Macpherson Estate	440 00		
Labor	12 30	452 30	
Cumming Street.			
Labor		5 63	
Scarth Road.			
Labor		4 25	
Roxboro Avenue.			
9 6-in. pipes	43 20		
Labor	23 65	66 85	
Hickory Street.			
19 ft. of 4-in. pipe	61 75		
Labor	34 52	96 27	
Ross Street.			
Labor		36 24	
Chatham Street.			
Labor		62 64	
Havelock Street.			
Labor		5 31	
Carried forward		2,672 10	160,421 62

	$ c.	$ c.	$ c.
Brought forward	....	2,672 10	160,421 62
Lowther Avenue, St. George to Huron.			
38 6-in. pipes, $264.10; 2 6-in. valves, $29.90	294 00		
2 round valve chamber tops, $20; 1 6-in. sleeve, $1.84	21 84		
Contract	166 89		
Labor	10 00		
		492 73	
Lowther Avenue, Walmer Road Easterly.			
1 round valve chamber top and centre	10 16		
1 6-in. valve, $14.95; 6-in. sleeve, $1.84; 152 ft. of 6-in. pipe, $152.90	169 69		
Contract	80 21		
Labor	6 00		
		266 06	
Nanton Crescent.			
17 6-in. pipes	118 15		
1 6-in. sleeve, $1.84; 1 6-in. cap, 82c	2 66		
1 hydrant, $27; 1 single branch, $2.70	29 70		
Contract	51 00		
Labor	6 84		
		208 35	
Lee Avenue.			
14 ft. of 2-in. wrought iron pipe, $23.80; 2-in. elbows and nipples, $1.84	25 64		
2 valve boxes, $4.64; 2 chap. valves, $9	13 64		
30 tees, $7.50; plugs, $1.46	8 96		
Labor	48 14		
		96 38	
Waverley Road.			
79 ft. of 4-in. pipe, $79.22; 1 4-in. valve, $8.75	87 97		
1 round valve chamber top, $10; 1 6-in. S. pipe, $3.46	13 46		
2 hydrants, $66.44; single branches, $4.26	70 70		
Sleeves, $2.66; caps, $1.14	3 80		
Contract	220 95		
Labor	55 90		
		452 78	
Englewood Avenue.			
2 6-in. valves, $29.90; 4 6-in. sleeves, $5.52	35 42		
2 round valve chamber tops, $20; 3 6-in caps, $2.46	22 46		
Carried forward	57 88	4,188 40	160,421 62

	$ c.	$ $.	$ c.
Brought forward	57 88	4,188 40	160,421 62
5 single branches	10 65		
Contract	282 00		
Labor	36 06		
		386 59	
Frichot Street.			
2 6-in. valves, $39.90 ; 1 6-in, sleeve, $1.84	41 74		
1 10-in. sleeve, $2.90; 1 4-in. sleeve, 80c.	3 70		
3 single branches, $7.73 ; 1 reducer, $2.06	9 79		
2 round valve chamber tops	20 00		
Contract	131 60		
Labor	24 96		
		231 79	
Treford Place.			
2 4-in valves, $17.50; 1 4-in. S. pipe, $1.60	19 10		
2 round valve chamber tops, $20; 1 S. branch, $2.10	22 10		
1 6-in. sleeve, $1.84 ; reducers, $2.06	3 90		
Contract	92 16		
Labor	38 19		
		175 45	
			4,982 23
SPECIAL SERVICES.			
12-in. Main, King Street West.			
Contract	....	70 89	
Lane in rear of Horticultural Gardens.			
Contract	....	5 90	
Pipe across Eastern Avenue Bridge.			
142 ft. of 12-in. pipe	532 80		
Hauling pipe	9 00		
40 bags of mineral wool	26 68		
Blacksmith's time	23 76		
Labor	28 00		
		620 24	
WASTE PREVENTION.			
Patterns, $38.04 ; flanges and bends, $25.08	63 12		
5 ft. of 6-in. pipe, $15.80 ; 2 peet valves, $9.00	24 80		
4 6-in. flange Globe valves	44 00		
17 ft. of 2-in. wrought iron pipe, $2.92 ; nipples, $3.68	6 60		
17 ft. of hose, $3.74 ; coal oil, $1.04	4 78		
Elbows, 46c.; sockets, 38c.; valves, $2.52	3 36		
Carried forward	146 66	697 03	165,403 85

	$ c.	$ c.	$ c.
Brought forward	146 66	697 03	165,403 85
Blacksmith work	5 69		
Labor	1,402 47		
		1,554 82	
ISLAND FIRE PROTECTION.			
30 brass screwed nipples, $30.00 ; elbows $1.84	31 84		
152 ft. of wrought iron pipe	25 93		
7 double iron boxes	11 34		
25 S. P. valves	81 25		
24 centre pieces, $3.36 ; rubber boots, $4.98	8 34		
Paint, 70c.; jute, 20c.	90		
Blacksmiths' time	17 24		
Labor	89 91		
		266 75	
			2,518 60
			167,922 45

APPENDIX

PROPOSED ELECTRIC LIGHTING AND ENERGY PLANT.

(Extract from City Engineer's Thirteenth Fortnightly Report to Work Committee—June 29th, 1900.)

In compliance with the request contained in the following extract from Report No. 7 of the Committee on Works:

"It is recommended that the City Engineer be instructed to prepare an estimate of the cost of constructing buildings and all necessary plant required for the distribution of said energy for heat, light and power throughout the City, also the annual cost of maintenance thereof, and that he be authorized to obtain such assistance as he may deem necessary in preparing such estimate. It is further recommended that the City Engineer prepare an estimate of the cost of a plant for generating electricity in connection with the distribution, also the cost of operating same,"

I beg to report that to enable me to report upon this matter, I engaged the services of Mr. R. J. Parke, Electrical Engineer, of this City, and also consulted Mr. Alex. Dow, Electrical Engineer, of Detroit, and beg to submit the following:

The approximate cost of constructing buildings and the necessary plant required for the distribution of electric energy would be $930,000.

Regarding the annual cost of operating this proposed plant, no offers have been received for the supply of energy, and as the preparation of an estimate of this cost involves a great deal of work, I do not consider it advisable, at present, to go any further into the matter.

The cost of installing an Electric Arc Lighting Plant, with a capacity of 1,350 arc lamps, using overhead circuits, would be, approximately, $294,000.

If the electric wires were placed underground in that portion of the City described in clause 11 of the specifications for Electric Lighting, the cost would be about $507,000.

The annual cost of operating this proposed plant, with overhead wires, including interest and depreciation, would be about $62.22 per lamp per annum, or about 17.04 cents per lamp per night.

Using underground wires in that portion of the City set apart in clause 11 of the specifications, the cost per lamp per annum would be about $70, or 19.16 cents per lamp per night.

These estimates have been prepared on the assumption that enclosed arc lamps will be used if a plant is installed.

C. H. RUST,
City Engineer.

PROPOSED ELECTRIC LIGHTING AND ENERGY PLANT.

CITY ENGINEER'S OFFICE,
August 10th, 1900.

Chairman and Members of the Board of Control:

GENTLEMEN,—My former report upon the above subject was referred back by your Board on July 6th last for further information. I now beg to report as follows:

The annual cost of operating the necessary plant required for the distribution of electric energy would be about $3.18 per horse power. This cost would be an average one for a plant having a capacity anywhere from 5,000 to 15,000 horse power.

The cost of a plant for generating electricity in connection with the distribution would be approximately $1,290,000.

The annual cost per horse power for operating this plant on the basis of ten hours per day, would be about $26. This cost will apply to a plant having a capacity of from 5,000 to 15,000 horse power.

Yours respectfully,
C. H. RUST,
City Engineer.

REPORT RE PROPOSED MUNICIPAL TELEPHONE PLANT.

CITY ENGINEER'S OFFICE,
September 12th, 1900.

To His Worship the Mayor and Members of the Council of the Corporation of the City of Toronto:

GENTLEMEN,—In compliance with the resolution of the Council of the 9th instant, ordering the City Engineer to prepare and submit to Council an estimate of the probable cost of installing and operating a telephone system for from 6,000 to 10,000 subscribers, I beg to submit the following estimate:

In preparing these estimates I have assumed that underground work would be used in that section of the City between Bloor Street on the north, the Bay on the south, Spadina Avenue on the west, and Sherbourne Street on the east.

The cost of installing a system for 6,000 subscribers would be approximately $675,000. The annual cost of operation, including depreciation at 5 per cent. and interest at 3½ per cent., would be approximately $120,000.

The approximate cost of a system for 10,000 subscribers would be $1,200,000. The annual cost of operating a plant of this capacity, including interest and depreciation, would be approximately, $205,000.

These estimates are based upon a common battery switchboard, which is, I understand, considered the most modern one, and is coming into general use. I have, however, recently heard that there is in operation, in a small town in Ohio, what is known as the automatic system : That is, no operators are required. If this is successful it would very much reduce the operating expenses, and it might be advisable to further investigate this system.

C. H. RUST,
City Engineer.

REPORT Re PROPOSED CIVIC ASPHALT PAVING PLANT.

City Engineer's Office,
Toronto, March 29th, 1900.

Chairman and Members of the Board of Control:

Gentlemen,--Complying with the verbal request of your Secretary, I forward herewith details of the cost of an asphalt plant :

Buildings	$4,500 00
Machinery and tools	14,000 00
Steam roller	2,500 00
Freight and duty	1,200 00
Total	$22,200 00

Nothing is included in this estimate for land, as we could probably erect the plant in one of the City's yards.

The estimate for machinery includes engines, boilers, oil pump, feed pump, air blower, compressor, stone mill for grinding lime dust, mixer, asphalt scales, dust scales, sand drums for drying sand, asphalt melting, tank and connections, pneumatic asphalt lifter, oil tanks and connections, sand heater, sand elevators, hoppers, etc., crusher bins and small tools.

This plant would have a capacity of probably 1,200 to 1,500 sq. yds. of pavement per day.

Yours respectfully,
C. H. RUST,
City Engineer.

REPORT

ON THE

DISPOSAL OF THE SEWAGE

OF

TORONTO

EXTRACT FROM REPORT No. 34 OF BOARD OF CONTROL, 1900.

City Engineer's Office,
Toronto, September 6th, 1900.

Chairman and Members of the Committee on Works.

Gentlemen,—With reference to a communication from the Committee on Works of May 21st last, forwarding a copy of the following resolution :

"That in view of the statement made by the City Engineer in connection with the bacterial treatment of sewage, that that officer be requested to furnish this Committee, at the earliest possible date, with all the information he has been able to gather in connection with this system of sewage disposal,"

and also to a communication from the Committee of June 19th last, forwarding a copy of a resolution moved in Council, by Mr. Ald. McMurrich, as follows:

"Moved by Ald. McMurrich, seconded by Ald. Sheppard, that whereas numerous resolutions have been passed by the City Council during the past ten years with a view to improving the sanitary condition of the City ; and whereas numerous reports at great expense to the ratepayers have been obtained from expert engineers, with a view to the disposal of the City's sewage ; and whereas no decided action has been taken thereon ; be it therefore resolved, that this Council deems it of the utmost importance that the work of putting down the necessary trunk sewers and intercepting sewers be proceeded with forthwith leaving the question of the disposal of sewage to be decided later on by the City Engineer ; and be it further resolved that the City Engineer be instructed to report to the Council forthwith the estimated cost of the said sewage improvement, and that a By-law be submitted to the ratepayers at the earliest possible date for the issuing of debentures necessary for the cost of the carrying out of this important and necessary work."

I beg to report as follows :

Bacterial Treatment of Sewage.

In my report to the Committee, of May 4th last, regarding this matter, I referred to the experiments now being carried on in England in connection with the bacteriological process of sewage purification, and stated that if, after further investigation, it was found that this system of treatment was suitable for Toronto, it would result in a large annual saving over the schemes proposed in my report dated October 12th, 1898.

In compliance with the request of the Committee to submit some information which may be of interest to the members, in connection with this matter, I have studied the various reports and Technical Journals that have been published within the past two or three years, regarding this subject, and beg to submit the following account of the two systems of bacterial purification, viz., the septic tank and the open bacteria bed systems.

The septic tank system, which is a tank, or series of tanks, preferably covered, is a process of removing most of the suspended organic matter and some which is in solution, and giving an effluent, which, although not chemically pure, is inoffensive to the sight or smell, and is pure enough to be turned into large streams or bodies of pure water without doing any appreciable harm. This system differs from the other processes in that it attempts to bring an entirely new and different class of bacteria into operation—the anaerobic. These bacteria thrive in the absence of oxygen and are the organisms that cause putrefaction. The operation consists in running the sewage steadily into a closed, darkened chamber, where it is acted upon by anaerobic bacteria, and the effluent is drawn off at the surface. The sludge produced is estimated at only about one-seventh of that produced by chemical precipitation. This effluent may again be treated by passing through sand filters, where aerobic bacteria are present, which gives, of course, a much purer effluent. The annual cost of operation is much less than with chemical precipitation.

The other system consists in passing the sewage first through a screen, extracting the coarser particles, paper, etc., and then allowing it to stand for a few hours on a coarser filter bed or tank, open to air and light, where it is acted upon by aerobic bacteria, which thrive in the presence of air and light, and the greater portion of the organic matter is removed or changed into harmless compounds. From the coarser beds the sewage is again turned into finer beds. The unsatisfactory point not yet fully demonstrated, is that the beds may have a tendency to gradually get choked and thereby become less efficient. The effluent appears to be and is purer than that of the septic tank alone, and equal to that from a septic tank and single bacteria bed combined, but the process requires considerably more land.

For the information of the Committee, it may be advisable to give some particulars regarding bacteria, and the works they perform, which are taken from the "Surveyor" of February 16th, 1900, and the "Engineering Magazine" of September, 1898.

From "Surveyor," February 16th, 1900.

"Bacteria are minute forms of vegetable life. Anaerobic live without air, that is without free oxygen aerobic existing with free oxygen. Exposure to air kills the anaerobies and all bacteria are destroyed if allowed to remain too long in contact with their own products. In the absence of water, or at least moisture, they are unable to multiply, and remain dormant. The work bacteria do in the purification of sewage is to oxidize the foul matters, of which it is partly composed. To effect thorough purification three separate processes are needed, viz ,

"1. Anaerobic.
"2. Partly anaerobic and partly aerobic.
"3. Aerobic.

"The systems in use can be divided into two classes, the first of which has as its object the destruction of the impurities by aerobic organisms, while the second consists of a primary decomposition by anaerobes, and a secondary purification by aerobic action. Bacteria systems have this strong recommendation, that they produce a minimum of sludge. Where screens are used there is a certain amount of matter retained, which must be taken away, but this state of things prevailed before. The residue from micro-organic treatment is inoffensive and may be termed "burnt-out ash." It accumulates very slowly and its occasional removal is neither a source of great expense nor nuisance. This, however, is but a secondary point as compared with the quality of the effluent produced. It is only by bacterial treatment that water can be effectively freed from its unnatural burden—sewage. The effluent from any well-considered and properly-executed scheme, is pure enough to be discharged into a stream without any risk whatever of subsequent putrefaction or injury to fish, flesh or fowl. The annual cost is, with automatic gear, a nominal amount."

From "Engineering Magazine," September, 1898.

"The purification of sewage is, therefore, a process of destruction of this organic matter by means of bacteria, and, finally, of the bacteria themselves from inanition. It necessitates their cultivation and a provision of the most suitable conditions for their life and propagation, until the organic matter shall be converted and the conditions of their existence shall cease. If we think of fermentation, and its cause and effect, we get an idea of the process. The aerobies do their best work when the sewage is exposed to the air. The anaerobies do their best work when air is excluded. A further condition of active life is the warm temperature of the sewage. Although freezing temperature will reduce the activity of the bacteria, it does not destroy all of them. The aerobic process, when applied to organic matter, in suspension, is slower than the anaerobic process. The practical application hereof is the fact that putrefaction hastens the destruction of solid organic matter by converting it into liquids, while oxidation hastens the destruction of liquid organic matter by converting it into soluble mineral matter. So far as concomitant effects are concerned, putrefaction causes offensive odours, while the effects of oxidation are imperceptible to the senses. In the chemical precipitation of solid particles the principal chemicals used were milk of lime and salts of iron, the precipitated matter forming a sludge on the bottom of the settling tanks and at intervals had to be taken out, freed from most of its water in filter presses and then removed. This process removed about one-half of the total organic matter and the purification of the remaining clarified liquid is accomplished by the aerobic bacterial process."

From "Engineering Record," October 8th, 1898. Paper by Dibdin & Thudichum.

"NATURE OF BED MATERIAL.—Many experiments have been made with a view to ascertaining the best material with which to construct bacteria beds. It is clear that in many cases the local conditions would render the use of one or other special substance very advantageous from the point of view of original cost of installation. The general experience of the authors is that coarse broken coke or burnt ballast indifferently may be used for the first treatment by coarse-grained beds, while for the fine-grained beds the best material is undoubtedly coke or pan breeze or cinder.

"DEPTH OF BED.—With regard to this point, it is difficult to speak with any certainty. Experience in working on a large scale, has led the authors to believe that the maximum limit of depth for the best results to be obtained is about 3 feet 6 inches. It has often worked well at a depth of 4 to 5 feet, but the alteration of a bed from 3½ to 5 feet was accomplished by a small reduction in the quality of the effluent produced."

From "Engineering," December 9th, 1898.

"There is one precaution to be taken with coarse bacteria beds which is of less necessity with the septic tank. The sand and road detritius must be trapped, or else it will fill the interstices and stop the action. This is done by passing the sewage through depositing tanks ; but there is the chance that the organic matter in suspension may be deposited too, and a sludge produced. As it is the great merit of the bacterial system that it avoids the production of sludge—a matter which can neither be sold nor given away, nor safely allowed to accumulate—there is always the risk of the course bed being gradually reduced in capacity by accretion. In the septic tank the intrusion of a little sand is of no practical importance. With reasonable care it will be years before it needs to be removed, and even then the process is quite simple and cheap. There is also no necessity to strain out rags, paper and the like. They will all disappear."

From "Engineering Record" October 8th, 1898.

"Judging from the experience gained in the Massachusetts trials and at Barking, Sutton and Exeter, it does not appear that there is danger of the temperature of bacteria beds in this country falling to a point sufficiently low to destroy the vitality of the organisms. Thus, in the case of Massachusetts, although there was ice over the surface of the filters during a considerable period, yet a good effluent was constantly produced. At Barking, during the severe frost of February, 1895, similar results were obtained, the filter continuing its work, although for six weeks it was covered with a sheet of ice. In this connection it will be well to point out a great danger that may arise from too careful distribution of the sewage over the surface of a bed. In such a case the incoming sewage itself may be frozen and fail to penetrate the bed at all, as was actually the case with an experimental filter on another plan at Sutton, even during the extremely mild winter of 1897 and 1898."

From "Surveyor," February 23rd, 1900.

"The report of the invaluable Manchester experiments, the results of bacterial treatment at Barking and Crossness, and the undoubted success of the installations on various systems now at work throughout the United Kingdom and abroad, warrant the inference that bacterial treatment is universally applicable. Not only is the cost less, but the results are far superior to any obtained by the use of chemicals, and the sludge difficulty does not arise.

"Different systems of sewage disposal have come into prominence and again receded from our view, because the working of nature, the one abiding condition, has been disregarded. Sewage farms had too much work given them to do, and as an inevitable result were incapacitated from doing it properly by reason of 'sewage sickness.' Chemical precipitation, tried to stop putrefaction or decay, was followed by 'secondary decomposition' in the effluent, and brought us face to face with a further difficulty, 'sludge.' Bacterial treatment is an application of the methods which observers have seen nature make use of, and I trust that in years to come it will not be said that those who advocated its adoption were unduly optimistic, but that they advised the use of the only efficient and economical process of sewage disposal."

Extracts from a paper read before the Engineers' Club, of Philadelphia, by Mr. W. Easby, Jr., on the results of bacterial treatment of sewage:

"The permanency of contact beds has been very fully investigated, particularly at Manchester, for it has been recognized that the value of this system will be small if the accumulation of sludge in the interstices of the bed cannot be prevented. The original capacity of all contact beds decreases quickly at first, from the formation of the bacterial film, which surrounds the pieces of bed material and progresses more or less rapidly thereafter, depending on the quantity and nature of the solid matter reaching the beds, and the method of operation. A long period of aeration does not restore contact beds to their original capacity, and in some instances has affected them very little. Data showing the relation between the kind and grade of bed material employed in different installations, and the degree of purification effected, are often not comparable, because other conditions influencing purification are at the same time variable, and the same difficulty is encountered in comparing most of the data relating to these new bacterial systems."

"The experience with coarse beds, at Crossness, shows most conclusively that sewage containing sand and street detritus, generally will produce permanent internal clogging in coarse beds, at such a rate as to render their use much too short for economy. It has been found that new contact beds must be matured by a quite limited application of sewage at first, and with a gradual increase up to their normal capacity, a process occupying several weeks."

From "Surveyor," March 2nd, 1900.

"Early in his paper, Mr. Stoble says, without any qualification, 'bacterial systems have this strong recommendation, that they produce no sludge,' although he admits that, except in the case of the septic tank system, screening is resorted to. Again, in the final conclusions and recommendations of the report, it is stated that 'in order that a bacteria bed may exercise its full powers of purification, it is necessary, among other things, that the sewage applied to it should, as far as possible, be free from suspended matters.' This is a very different conclusion from that arrived at by those experts who claim that coarse bacteria beds can deal efficiently and economically with crude sewage."

From "Surveyor," February 16th, 1900.

In an exhaustive report by Dr. Clowes, Chemist, and Dr. Houston, Bacteriologist, on the bacterial treatment of the sewage of Barking and Crossness (the outfall for the sewage of London north and south of the Thames, respectively) published last October, Dr. Clowes states that the points of advantage of bacterial over chemical treatment are:

"1. It requires no chemicals.

"2. It produces no offensive sludge, but only a deposit of sand or vegetable tissue, which is free from odor.

"3. Removes the whole of the suspended matter, instead of only about 80 per cent. thereof.

"4. It effects the removal of 51.3 per cent. of the dissolved oxidisable and putresible matter, as compared with only 17 per cent. removed by chemical treatment.

"5. Resultant liquid or effluent is entirely free from objectionable smell, and does not become foul when it is kept. It further maintains the life of fish."

From "Engineering Record," October 28, 1899.

"The general conclusions drawn by Dr. Clowes, from the results of these experiments, are that neither on chemical nor possibly on bacteriological grounds, can any serious objections be raised to the introduction of the effluent from the coke bed into a portion of the River Thames, which is cut off by locks from the intakes of the water companies, and the water from which is not employed for drinking purposes. The effluent certainly will not cause any deposit on the river beds, and will even tend to render the turbid water of the lower river more clear and transparent. At the same time, the liquid discharged from the outfall into the river, will be sweet and entirely free from odor. Furthermore ; it will carry into the river the bacteria necessary for completing its own purification in contact with the aerated river water, and under no condition can it therefore become foul, after it has mingled with the stream. The effluent will in no way interfere with fish life in the stream."

Experiments with the Filtration of Crude Sewage through Coke at the Crossness Outfall of the Sewerage System of London. (From "Engineering News," March 8th, 1900.)

"The coke used is from gas works, about the size of chestnuts. The beds are filled to the surface with sewage, which is then allowed to remain for some hours in contact with the coke and entrained air, after which the effluent is drained off and the beds are given a rest. It was found that the surface of each piece of coke had, in course of time, become covered with a soft matter, consisting largely of chaff, straw and woody fibre. As this deposit on the coke increased, the sewage capacity of the coke bed decreased. A series of gaugings of capacity of the 13-ft.

coke bed, showed that the decrease of capacity was proceeding at the rate of one per cent. of the original capacity per week. As this threatened a short life to each coke bed when it was dealing with raw sewage, experiments have been undertaken with a view of preventing, or at any rate considerably retarding, the choking of the coke bed."

From "Surveyor," February 16th, 1900.

"The septic tank system is so called because the purification of the sewage is begun by a process of putrefaction. The products of this first stage are passed on to fine filters, where oxidation takes place. The filtering material is broken clinker or coke from ⅛ to ½ inch in size. Under this system no screening is done. All the solids, other than road grit, enter into the tank and are there liquified or turned into gas, by anerobic action. There is, however, no smell from untreated sewage. The final effluent is bright and without smell."

From "Surveyor," January 20th, 1899.

"There is probably no department of Municipal Engineering which has been marked with such an interesting development and been characterized by such a departure from the old methods hitherto in vogue, as in that relating to sewage disposal. Experiments had shown that the purification of sewage was not dependent so much on chemical and mechanical agencies, as on bacterial agency, and these experiments had been conducted both in America and England, almost simultaneously. The discovery was looked upon with some amount of incredulity, and the proposal that sewage could be purified without the aid of chemicals and land, was not generally accepted by Sewerage Engineers. Inasmuch, however, as at Exeter, where the bacteria, or as it is otherwise termed, the biological, purification of sewage was shown to be successfully effected by means of the septic tank, the effluent being passed over fine filters; at Sutton, Surrey, where by means of two filters, termed a coarse-grained and fine-grained filter, the sewage was with equal success purified by biological agency, and at Hendon, where the crude sewage was treated by means of one artificial filter only, on a small scale, the results appear to be in each case uniformly good. Sewerage Engineers quickly became cognizant of these results, and after close investigation accepted them. It was only, however, during the past year that there was any general adherence to the new methods. Now it appears that among Sewerage Engineers generally throughout the contry, it is almost unanimously agreed that a great step forward has been made in the hitherto difficult problem of sewage disposal and purification; that the biological purification of sewage has lessened both the difficulties and the cost of treatment, and that it has become practicable to purify the sewage of every township without unduly burdening the ratepaying community with the purchase of land and with the cost of chemicals, in endeavoring to promote precipitation and treat manufacturing sewage. As a consequence, we have seen that during the past year nearly all new sewage schemes have embodied one or the other of the biological systems of purification and just at the close of the year the Corporations of Manchester and Leeds gave some particulars of the experiments they have been conducting, the results showing that the sewage of these manufacturing towns can be successfully and efficiently purified by biological methods."

It may be of interest to the Committee to give an account of the bacterial treatment of sewage at Sutton, which was one of the first towns to adopt the bacteriological system. This account is by Mr. C. Chambers Smith, Town Engineer of Sutton, and is taken from the "Surveyor" for November 10th, 1899, and from "Engineering Magazine," for September, 1898.

Sutton Experiments. From "Surveyor," November 10th, 1899.

"Sewage disposal works were constructed in 1891 and 1893, and comprise an area of twenty-eight acres, eighteen acres only of which, however, are capable of irrigation. The works were originally designed for chemical precipitation and broad irrigation. Up to November, 1896, the whole of the sewage was treated by chemicals.

"It is a serious reflection that within a period of two years from the inauguration of chemical precipitation and broad irrigation, which had been approved of by the Local Government Board, that the local board found themselves in the position of being unable to satisfy the requirements of the conservators of the River Thames. The sludge resulting from chemical precipitation was pressed into cake. There was no demand for this material and the nuisance which it created was highly offensive.

"In November, 1896, at Mr. Dibdin's suggestion, they constructed the first bacteria bed for the treatment of crude sewage, in England, a system which has been attended with remarkable success, and revolutionized the methods of sewage purification. After the installation of these works, representatives and deputations from different cities flocked week by week to view the works. As an evidence of this notoriety it may be observed that during the year of 1898, there were not less than three hundred and five deputations or representatives, to inspect the system. Among these were representatives from Australia, South America, New Zealand, United States, Germany, France, Belgium, Austria, Egypt, India, etc. These numerous deputations were a striking evidence as to the common and universal difficulty under which local authorities are laboring in regard to the vexed question of sewage disposal. No system of sewage treatment, it has been well observed, has ever met with such favor as the bacterial system, and as simplicity of design and working, smallness of cost and high efficiency are its great features, it has been adopted by other authorities to a great extent.

"All the experiments with bacteria beds show that the object for which they are intended, viz., to abolish sludge, has been realized, and that sewage can be purified without chemicals, at a small cost, being little more than that incurred by the labor in attending to or supervising the filling and discharging of the filters, and that sewage purification may be carried on with little or no nuisance.

"The cost of treatment by chemical precipitation and broad irrigation is also greatly in excess of the bacterial system. The cost of treating the sewage and working the farm, for the years ending March 31st, 1895 and March 31st, 1899, was as follows: In the first mentioned year, the system consisted of chemical treatment and broad irrigation. The expenditure on disposal and purification was about $6,000, the receipts amounting to about $600, giving a net cost of treatment about $5,400. The average cost per million gallons about $63. During the year ending March 31st, 1899, the system was the biological treatment. The expenditure totalled $5,000, the receipts from the farm being $2,000, net cost about $3,000, average cost per million gallons about $16.00."

From "Engineering Magazine," Sept. 1898.—Paper by Mr. Rudolph Hering, C. E.

"The population of the district draining into the present works is about 13,000. When the bacterial system was first introduced, one of the precipitation tanks was used for the process. It had an area of about 183 square yards. The tank was filled with so-called ballast, consisting of broken-up, burnt clay. The average depth of this material in the filter was about 3 feet, 6 inches. The filter can hold 13,500 gallons, the proportion being approximately one-third sewage and two-thirds ballast. The flow of sewage per square yard is 186 gallons per day and per cubic yard of material 139 gallons per day. At that rate the daily quantity of sewage per acre would be about 900,000 gallons. An automatic rotary screen is used to intercept the floating paper, etc., before the sewage is applied to the tanks. The bacteria tank is reported to have been in daily work since November 21st, 1896, treating, on an average, 30,000 gallons per day. The tank is charged twice, or sometimes three times per day, after passing the sewage through screens to intercept the larger pieces of floating matter. The time occupied in filling is about three-quarters of an hour. Care is taken to prevent the sewage from reaching the surface by stopping the flow as soon as the sewage level rises to within a few inches of the top of the bed ; thus light is excluded. The tank is then allowed to remain charged for about two hours, during which time the anaerobies have their opportunity to work, after which the valve is opened and the 'fermenting' sewage flows out. The time occupied in emptying is about one hour and a quarter. The tank is then allowed a rest of two hours when the aerobic bacteria are supposed to do their share of the work, after which it is again charged, the cycle occupying six hours. The total quantity of sewage treated in this manner up to March 31st, 1898, is given as 16,600,000 gallons. Mr. Dibdin estimates that in the tank 57.25 grains of the original 60 grains of suspended matter, per gallon, had been absorbed, equalling 603 tons of sludge.

"A sufficient number of tanks will be added to treat the entire sewage flow of the town. After the sewage has been passed through these course-grained bacteria tanks, it is passed through fine-grained tanks or filters. The fine-grained filters are composed of various materials, coke breeze, sand, gravel, and burnt ballast, the grains of the latter not exceedicg ⅜ of an inch in diameter. The reduction of the oxidisable matters in solution is reported by Mr. Dibdin to be from 4.54 to 1.67 grains per imperial gallon in the bacteria tank, or coarse filter, and finally to about 0.64 grain in the fine filters, showing an average reduction of about 63 per cent. by the coarse, and a further reduction of 22 per cent. by the fine filters, or 85 per cent. in all. The nitrogenous organic matter, as indicated by the albuminoid ammonia, was in like manner reduced 58.45 per cent. in the course, and 20.09 per cent. in the fine filters, or 78.54 per cent. in all. The matters in suspension in the crude sewage are reduced from 60.03 to 2.78 grains per imperial gallon in the coarse filter and still further to 0.725 grains per gallon in the filtrate issuing from the fine coke breeze filter. The difficulties which may be expected in the Sutton Process, lie in the possible gradual filling up of the filters with slowly-oxidisable, vegetable matter, not strained out by the screens. It is difficult to operate economically a strainer fine enough to keep out fibrous vegetable material. A plant similar to the one in Sutton has been operated at Leeds, and there it has been found that the sludging up of the beds was one of the chief difficulties. It was also found that, after a fortnight's rest of a filter, the flow was materially increased."

Exeter System Septic Tank. From "Engineering Record," June 11th, 1898.

"The sewage from about 2,000 inhabitants has been dealt with continuously for nearly eighteen months. They have recently installed additional works, and provision has been made for a population of about 46,000. The sewage flows to the disposal works, which consist of six tanks, each 35 feet by 181 feet by 7 feet, having a total capacity of 262,422 cubic feet. The tanks are so arranged as to be used either singly or in series. When the outfall sewer is running full bore, contents will be changed in 7½ hours, the effluent passes over aerating weirs to filters, which will deal with a quantity of sewage equal to twice the daily flow from the prospective population, and with storm water up to 1½ times the volume of the sewage. The filters are eight in number and have a total area of 2½ acres or 13,613 feet each and 4 feet deep, with a working capacity of 2,500,000 gallons per day."

Leicester Bacterial Experiments.

Mr. Mawbey, Borough Engineer of Leicester, has recently issued a very valuable report upon the result of the experiments carried on under his direction, which entended over thirteen and a half months. The following is a short description of the experimental works, taken from Mr. Mawbey's report:

"The works constructed for these experiments comprise a brick and concrete channel and weir chamber for delivering and measuring the crude sewage. A detritus tank constructed in brick work and concrete, having a total water capacity of 18,681 gallons. A second tank constructed in brick work and concrete, and having a total water capacity of 125,962 gallons. This open tank, after a series of experiments, was converted into a closed septic tank.

"Beds.—Four clarifying bacteria beds, having an average working depth of 4 feet 6 inches of material, and a total clinker and water capacity of 740 cubic yards. These beds are constructed with earth work and clay puddle, but with brick work in cement division walks. On the earth floors of the beds are laid 6-in. land tile drains, with 4-in. branch tile drains laid diagonally. The filtering material is crushed and screened clinkers from the Refuse Destructors. A short distance below the clarifying beds, there was also constructed two second and third contact, or fine bacteria beds."

From "Surveyor," May 18th, 1900.

"It is noteworthy that in all these processes the sewage was first passed through the detritus tank, and that Mr. Mawbey emphatically disagrees with those who have argued that this is unnecessary, and has always contended that it is indispensable for large towns at all events, a contention which is supported by the results of experiments at Leeds and elsewhere."

From "Surveyor," May 4th, 1900.

The "Surveyor," in the summing up of Mr. Mawbey's report, says:

"There is considerable divergence of opinion, for example, as to whether the new methods can cope effectively with trade refuse, can apply to large towns as well as to small. and can effect such a degree of purification as will admit of subsequent treatment on land being dispensed with. There is also the question of the innumerable variations that may be employed in the construction and working of the filter beds and the relative efficiency of the different methods. It may at once be stated that Mr. Mawbey was not in search of a method of purification that would entirely displace the land treatment now in operation, and he is still far from recommending such a course, which, indeed, never seems to have been seriously entertained.

"The importance attaching to bacterial methods, is largely due to the expectation that they will enable land to be dispensed with altogether, by producing an effluent which shall reach such a standard that it can safely be turned into a water course. In other words, it is hoped that bacterial treatment will more particularly prove the salvation of those places where the necessary land can either not be acquired at all, or only at a prohibitive cost."

Sewage Disposal at Leeds. (From "Surveyor," September 15th, 1899.)

"In 1897 the Council decided to spend $150,000 in increasing the area of the settlement tanks, and in September an additional sum of $25,000 was granted for the extension of the experimental sewage purification works. They are now treating their sewage by chemical precipitation and are obtaining about 300 tons of sludge per day. It has become a serious question as to what is to be done with the sludge. The experimental beds which they had constructed, gave purification of from 85 to 92 per cent. They had also experimented with the septic tank system. The best results gave purification amounting to 90 per cent. The works at Knostrop were quite a school of sewage treatment The Royal Commission had a chemical expert on the spot and another expert was working in a bacteriological laboratory there, under Prof. Boyce. All this being in addition to the City Engineer's observations in the Corporation Laboratory. They were no doubt aware that a mixed sewage, like that of Leeds, was more difficult to treat than a plain domestic sewage.

From "Engineering Record," July 29th, 1899.

"The experience gained shows that 400,000 imperial gallons per day can be dealt with on one-half acre of coarse bed and one-half acre of fine bed, or one acre per day in all, after the grit has been removed in a settling tank, and the grosser solids—paper, fibre, etc.—screened off. This gave a minimum of 50 acres of beds for 20,000,000 imperial gallons; but in order to have spare beds, it is recommended to have 70 or 80 acres, or say 4 acres per 1,000,000 gallons. Leeds, under the old system, would have to deal with 300 tons of sludge per day, or say 100,000 tons per annum."

Manchester Sewage Disposal. (From "Engineering Record," July 29th, 1899.) Dr. Rideal's Lecture.

"The Local Government Board held an enquiry last year, with reference to the application of the City Corporation to borrow $800,000 for the purpose of sewerage and sewage disposal. It was explained that Manchester had tried filtration by land and chemical treatment, but neither of these had been satisfactory. Eleven tanks had now been constructed at Davyhulme, each 300 feet long by 100 feet wide and 6 feet deep, with a united capacity of 12 to 15 million imperial gallons, equal to half a day's dry weather flow. The population of Manchester was 520,000, and was increasing at the rate of 4,700 per annum. The tanks were originally used as chemical filters, the treatment and removal of sludge costing about $85,000 per year, the chemicals alone reaching about $450 per week. It was proposed to utilize these tanks for settling the raw sewage, which would subsequently pass through sixty acres of double contact beds, filled with coke breeze. An effluent would then be introduced without the use of land. It is also stated that if the 'double contact' did not suffice, they would employ a 'third contact.'"

From "Surveyor," November 10th, 1899.

"The conclusions and recommendations of the experts appointed to investigate the Manchester System, are as follows:

"That the bacterial system is the system best adapted for the purification of the sewage of Manchester.

"That any doubts which may have arisen in the first instance, as to its suitability, owing to the presence in Manchester sewage of much manufacturing refuse, have, through the convincing results of our experimental enquiry, been entirely banished. The results obtained have altogether exceeded our expectations, as to the possibility of purifying a manufacturing sewage, inasmuch as it was previously a matter of common belief that in such a liquid only a most insignificant amount of nitrification could be induced.

"That inasmuch as a bacterial contact bed can only effect a definite amount of purification in a single contact, it becomes necessary, in order to carry the purification beyond this limit, to apply the effluent to a second bed, in which again a further definite amount of purification can be effected. Hence, for obtaining a high degree of efficiency in the bacterial purification of sewage, a system of multiple contact is generally necessary. Thus it may be taken broadly that in the first contact fifty per cent. of the dissolved impurity is removed, and that in the second contact fifty per cent. of the impurity still remaining in the effluent is disposed of, and so on.

"In order that a bacterial contact bed may exercise its full powers of purification, it is necessary (*a*) That it should be allowed sufficiently frequent and prolonged periods of rest; (*b*) that the sewage applied to it should, as far as possible, be free from suspended matters; (*c*) That the sewage applied to should be of as uniform a character as possible.

"The above conditions are secured by passing the sewage, as it arrives at the works, through an adequate system of screens, catchpits and tanks.

"The capacity of bacterial contact beds has been found to remain practically constant, after they have been in operation for a period of three months.

"With regard to the amount of sewage which can be purified by a given bed, without the latter being overtaxed, our prolonged experimental enquiry has shown that each bed may safely receive four fillings in the twenty-four hours, provided the sewage has undergone the preliminary subsidence and septic preparation in tanks, and that the bed is recorded about one day's rest in every week. In the event of a bed having been unduly taxed, its efficiency is only temporarily impaired, and can be restored by a few days' repose.

"Our experiments show that the bacterial system of treatment is efficacious at all seasons of the year, the temperature of the sewage being sufficient both to prevent any stoppage of the beds, by the formation of ice, and also to maintain the necessary activity of the bacteria, even in the coldest weather.

"Finally, we may state our confident opinion that with the system of bacteriological treatment of the sewage of Manchester, set forth above, an effluent will be produced which will not only conform with the Mersey and Irwell standard, but which will also materially improve the condition of the Ship Canal. Furthermore, as this system does away entirely with the use of chemicals, and at the same time, to a very large extent, reduces the volume of the sludge to be dealt with, it is obvious that much of the present expense will be saved by its adoption, and this saving may be taken as a material set-off against the cost of the construction of the proposed works."

From "Engineering Record," July 29th, 1899.

"In December, 1897, a Sub-Committee of the Manchester City Council visited representative sewage works at Barking, Friern, Barnet, Sutton, Oldham, Swinton, Chorley, Glasgow, Salford, Hendon and Accrington. The conclusions of the Committee are shortly :

"1. That filtration by land is altogether impracticable.

"2. That no practicable system of precipitation by chemicals alone, has been laid before them which will meet the requirements of the Mersey and Irwell oint Committee.

"3. That the method most reasonably practicable and available, is the biological filter or bacteria bed, such as may be seen in operation at many of the places visited."

Sheffield Sewage Disposal. (From "Engineering Record," 9th June, 1900.)

"Experiments were begun with the bacterial method in 1897, the sewage at present being treated by chemicals. The population contributing to the works is estimated at 350,000, the average daily flow being about 20,800,000 gallons. An important point in connection with disposal by lime precipitation, is the production of large quantities of sludge. It was anticipated that farmers would be willing to use this as a manure, but these anticipations were not realized, and there has been an accumulation amounting to hundreds of thousands of tons.

"The total sum expended on sludge removal, from 1892 to 1899, was over $200,000, the amount moved being about 360,000 tons. The present production is 1,200 or 1,300 tons per week. This is dumped on land purchased for the purpose. The experiments with the bacterial system have so far been successful. The cost of the six filters was about $15,000, including about $7,500 for coke. Chemically, the working of the beds has been quite satisfactory, the standard of purification having remained uniformly good, and up to the time of the report there has been no sludge to deal with.

"During his investigations, Mr. Wike, City Surveyor, visited most of the important sewage farms in England, and considered very few of them successes, either from a financial or a practical point of view. The only farm which treats a quantity of sewage equal to or greater than that of Sheffield, is at Birmingham, where the daily flow is about 27,600,000 gallons. Up to 1897 the area of the farm was 1,240 acres, but in that year authority was obtained for the purchase of an additional 1,200 acres. The system is not one of pure irrigation, as the sewage is first treated with lime, which aids precipitation and neutralizes the acids. According to a report made in September, 1898, the accumulation of sludge during the year covered by the report, was 326,600 cubic yards. The working expenses for the year were about $218,000, and the income from crops, etc., was about $115,000, leaving a balance of expenses over receipts, of about $103,000. To this must be added $102,000 for interest, etc., making a total cost of about $205,000. At the time of the report the total capital expended was about $2,135,000. A further expenditure of $2,000,000 was in view, and it has since been stated that the sum expended or authorized, exceeded $5,000,000.

"Referring to the septic tank, Mr. Wike thought that although the septic tank appears to answer its purpose for a small population, it would be an exceedingly costly system, if applied to so large a volume of sewage as that of Sheffield. The only course remaining, was the extension of the biological filter-beds to treat the sewage of the whole city and this project was recommended by Mr. Wike, and adopted by the City Council. The adopted project consists in laying out about 70 acres of land in the vicinity of the present works, as filter-beds.

"A preliminary estimate of the cost of the 70 acres of land, alterations to the present tanks and works and the construction of filtering beds, amounts to about $570,000, exclusive of filtering material, or any provision for the treatment of storm water. If coke is used for the beds, the estimated cost is $590,000 in addition to the above figures, making a total of $1,160,000. The annual cost of working the filters is estimated at $35,000, and the annual expense, including interest on the cost at 3 per cent. and a sinking fund at 3 per cent., based on repaying in fifty years, is given as $80,000."

The International System of Bacterial Sewage Treatment. (From "Engineering Record," April 7th, 1900.)

"Two plants have recently been installed at Southwold and Reigate, and were constructed by the International Purification Syndicate, London. For the aerobic, or oxidizing beds, polarite is used, and a revolving carrier for the distribution of the liquid over the surface of these tanks. At Southwold, the plant comprises an open septic tank, an anaerobic and a final aerobic bed, the latter containing the polarite. The effluent from the anaerobic bed is sprayed over the aerobic bed by a Candy-Caink revolving sprinkler. The purpose of this sprinkler is to prevent the liquid from passing unequally through the large-grain porous material, thus avoiding stagnant sides or corners, or a rapid flow through a few channels in which little purification occurs. The results, as stated, are that the purification, from a bacteriological point of view, was ninety-seven times better than that obtained with the open septic tank. The Company holds that the great increase in the amount of dissolved oxygen in the effluent, is the result of the revolving sprinkler. This intermittent sprinkling produces a continual current of fresh air through the bed, the effluent being practically saturated with dissolved oxygen. On the other hand, with a contact bed, Drs. Kenwood and Butler find that the effluent contains practically no dissolved oxygen at all, which is only to be expected from a bed worked water-logged, even if rests are given between the working."

From "Engineering Record," June 11th, 1898.

"The various methods, based upon chemical precipitation and subsequent land treatment of the effluent, have given results which have seldom been satisfactory from an economic point of view, and which have often been disastrous from other causes, to such an extent that many authorities are now refraining from the erection of works on the old lines. The difficulties which have arisen have usually proved, on investigation, to be due either to the injudicious and extravagant use of chemicals, or to the unsuitability of the land acquired for the treatment of the effluent."

From information I have been able to gather, the following is a partial list of towns in England which have adopted the bacteriological system of sewage disposal: Exeter, Sutton, Oswestry, Yeovil, Carlisle, Bilston, Lichfield, Barrhead, Nuneaton, Southwold and Reigate. The following cities are now carrying out a very extensive and exhaustive series of experiments with this method of disposal: London, Manchester, Leeds, Sheffield, Leicester and Bradford, and the results in Manchester, Leeds, Sheffield and Leicester have been so satisfactory that it has been decided to adopt this system of disposal.

Although a large number of small towns have adopted this system of sewage disposal, it does not appear at present that any city, having a population as large as that of Toronto, has constructed works for the treatment of the whole of its sewage by this method, although Manchester, Leicester and Sheffield appear to have adopted the report of their Engineers and have decided to construct works to treat the whole of their sewage by the bacterial system, and it is evident that these Engineers would not have recommended this system of disposal, unless they were satisfied that the method proposed by them would solve the present difficulties existing in these cities.

In reading over the various reports upon this question, a number of which are evidently prepared by gentlemen who are very strong advocates of the biological treatment of sewage, there would appear to be no possible drawback to this system, but it is found, in studying the reports of a number of Sewerage Engineers, who have gone carefully into the subject, that there are some matters in connection therewith which require careful consideration, as although the early exponents of the system especially emphasize the fact that the sludge problem is absolutely solved, yet from other sources this does not appear to be the case, there still being a certain amount of sludge to be dealt with.

There is also to be considered the question of the efficient working of the bacteria beds during our extremely cold weather. From information I have been able to gather, it is the opinion of most Engineers that no difficulty need be anticipated in this respect. From the results of the experiments carried out by the State Board of Health of Massachusetts, it was found that the beds worked almost equally as well in cold as in warm weather.

Referring, in conclusion, first, to the resolution moved in Council on the 12th June last, which the Committee forwarded to me to report upon, I can only reiterate the statement contained in my report to the Committee of May 4th last (see Appendix "A,") viz., that it would be inadvisable and impracticable to commence the construction of the intercepting sewers, until a method for the disposal of our sewage has been decided upon.

"The method of the final disposition of the sewage will probably very materially affect the grade and the location of the intercepting sewers. For example, if it were decided to adopt the bacteriological treatment, it might be economical to treat the sewage at two different stations, one situated at the west end, in the vicinity of the Old Fort, and the other at the eastern City limits. If this were done the character and size of the intercepting sewers would be entirely different from what they would be if the sewage were treated at one point; or if it were finally decided to adopt the land treatment of the sewage, this would also affect the location of the outfall.

It does not seem reasonable or desirable to submit a By-law to a vote of the ratepayers, involving an expenditure of probably two million dollars, unless a complete scheme for the disposal of our sewage is first prepared, showing the proposed location of the sewers, the method of disposal, the annual cost of operation, with complete details, which the ratepayers will no doubt, require to familiarize themseves with before they can vote intelligently upon the question. Under these circumstances, I think the Committee will agree with me, that it is advisable, before submitting a By-law to the people, to first decide upon a complete scheme of sewage disposal, rather than submit a By-law, based upon incomplete information, which would probably result in its overwhelming defeat.

Secondly, from the information contained in this report, it seems reasonable to assume that the Biological Treatment of sewage could be successfully operated in this City, but before finally deciding to adopt this method, there are several matters requiring careful consideration, and I am not at present prepared to recommend its adoption. Although I have ascertained the cost of the intercepting sewers, I am not able to give an estimate of the cost of the treatment of our sewage by the Bacterial method. Nor can this be done until it is finally determined which system will be the best suited for our needs, but the total cost would probably be about $2,000,000.

It appears to me that if the City Council are desirous of having this matter submitted to the ratepayers, it will be necessary either to examine the different plants in operation in England, or to engage the services of an Engineer, who has had experience in the construction of similar works in cities in Europe.

Finally, I think the Committee will no doubt agree with me that it would be inadvisable to recommend the adoption of a system of sewage disposal, without further investigation.

Respectfully submitted.

C. H. RUST,
City Engineer.

APPENDIX "A."

Toronto, May 4th, 1900.

Mr. Alderman Lamb, Chairman Committee on Works:

SEWAGE DISPOSAL.

DEAR SIR,—In reply to yours of the 26th April last, regarding the above matter, I beg to refer you to my two reports addressed to the City Council on this subject, dated October 12th, 1898, and November 3rd, 1899, copies of which I again submit.

Since the Report dated November 3rd, 1899, was prepared, some discussion has taken place as to the advisability of commencing the construction of the intercepting sewers, leaving the question of the final disposition of our sewage for future consideration. This I consider impossible and impracticable. It does not appear reasonable nor desirable to submit a By-law to the ratepayers, involving an expenditure of probably two million dollars, unless the city has first prepared a complete scheme, showing the lines of the proposed sewers, the methods of disposal, and the actual cost of the proposed undertaking.

I have been carefully studying the experiments, now being carried on in England in connection with the bacterial treatment of sewage, and the result so far appears satisfactory. So much so that Manchester, Sheffield and other towns have about decided to substitute this system in the place of chemical treatment. If, upon further investigation, it should be found advisable to adopt a somewhat similar system for Toronto, it should result in a large annual saving over the proposed chemical treatment, as outlined in my report dated October 12th, 1898, if the results are such as stated by the reports received from England.

In conclusion I am not prepared to recommend such a large expenditure, until I have had an opportunity of thoroughly investigating the possibilities of the bacteria system of sewage disposal, and I do not think the ratepayers would vote such a large amount of money, until they had the fullest information in connection with the proposed scheme, endorsed by Engineers of high ability, who have had actual experience in the carrying out of works of a similar magnitude, in cities of at least the size and importance of Toronto.

Yours respectfully,

C. H. RUST,
City Engineer.

RATES OF TAXATION IN LARGE CITIES.

Extract from Paper Read by Mr. Herrmann, Commissioner of Water Works, Cincinnati, Ohio, before Am. Soc. of Municipal Improvements, October, 1898.

Name of City.	Present Taxable Valuation.	Total Tax Rate per $1,000.	Percentage of True Value of Real Estate.	Amount Produced.	Valuation on a uniform basis of 75 per cent. of the true value of Real Estate	Rate necessary per $1,000 to produce same amount of money.
	$	$ c.		$	$	$ c.
*St. Paul, Minn...	93,000,000	21.40	40	1,990,200	161,687,500	12.31
Kansas City, Mo....	67,750,000	26.24	40	1,777,760	113,250,000	15 70
Cleveland, O........	141,915,430	29.30	35	4,158,122	263,919,535	15.76
†St. Louis, Mo......	353,988,510	20.50 16.70	60 to 66⅔	6,584,186	409,821,885	16.07
Indianapolis, Ind...	121,000,470	17.30	70	2,093,308	126,819,078	16.51
San Francisco, Cal..	351,784,094	16.95	75	5,962,740	351,784,094	16.95
Boston, Mass........	1,036,063,094	13.60	100	14,090,458	828,514,369	17.01
Chicago, Ill.........	232,026,610	96.50	11	22,390,567	1,306,254,420	17.14
Detroit, Mich........	207,636,860	19.23	65 to 70	3,992,856	226,424,333	17.63
Philadelphia, Pa....	864,516,035	18.50	75	15,993,546	864,516,035	18.50
‡Columbus, O........	62,685,080	27.00	50	1,692,497	87,515,745	19.34
Newark, N.J........	138,373,305	21.00	70	2,905,839	146,271,469	19.87
Milwaukee, Wis....	144,683,425	23.12	65	3,345,080	163,322,824	20.48
§Providence, R.I....	181,558,120	16.50	100	2,995,709	145,875,570	20.54
Denver, Col........	73,101,485	31.00	50	2,266,146	109,652,227	20.67
Cincinnati, O........	196,677,104	26.18	58	5,149,006	244,006.522	21.10
Rochester, N.Y.....	112,792,990	20.73	80	2,338,198	106,424,411	21.97
Buffalo, N. Y........	245,674,630	23.54	70	5.783,180	262,133,595	22.06
Omaha, Neb.........	33,049,503	47.125	33⅓	1,557,457	67,330,082	23.13
Albany, N.Y........	68,276,895	20.00	90	1,365,537	58,482,120	23.35
Louisville, Ky......	118,800,000	23.65	75	2,809,620	118,800,000	23.65
Toledo, O...........	50,500,000	33.20	50	1,676,600	69,500,000	24.12
Baltimore, Md......	362,122,738	24.375	75	8,826,741	362,122,738	24.375
Nashville, Tenn	35,399,390	24.50	75	867,285	35,399,390	24.50
New Orleans, La....	139,199,913	27.00	90	3,758,397	122,147,228	30.77
Pittsburg, Pa.......	267,764,072	23.65	100	6,332,620	201,298,625	31.46
Minneapolis, Minn..	109,654,337	25.00	100	2,741,358	86,705,851	31.62
Allegheny, Pa......	75,500,000	24.95	100	1,883.725	56,625,000	33.27
Jersey City, N. J...	89,962,761	28.90	100	2,599,923	69,358,956	37.49
Toronto, Can.......	‖ 126,681,312	17.00	100	2,113,702	86,010,984	24.55

* Does not include removal of ashes.

† St. Louis maximum rate, $20.50; minimum rate, $16.70.

‡ Does not include cleaning of streets.

§ Does not include removal of ashes and garbage.

‖ This includes $12,000,000 personal property and income.

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